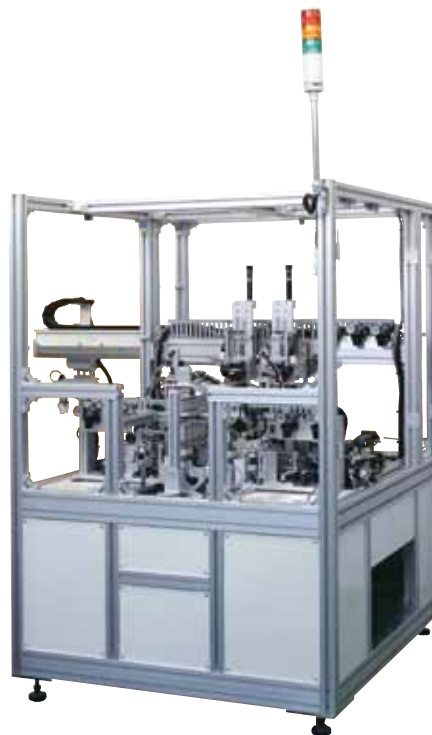
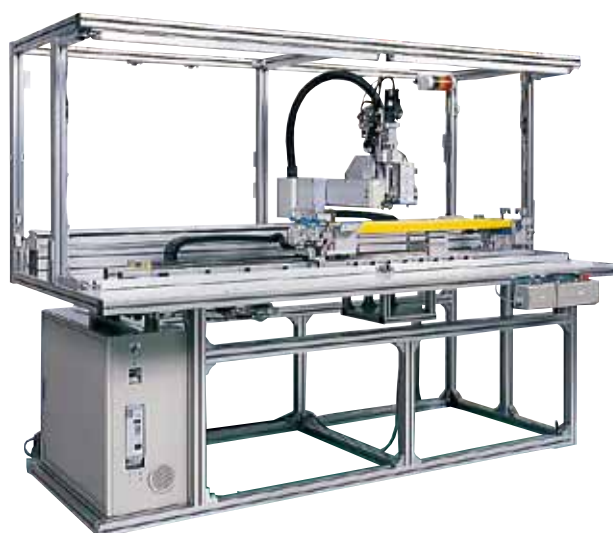




STANDARD FRAME

Technical Data

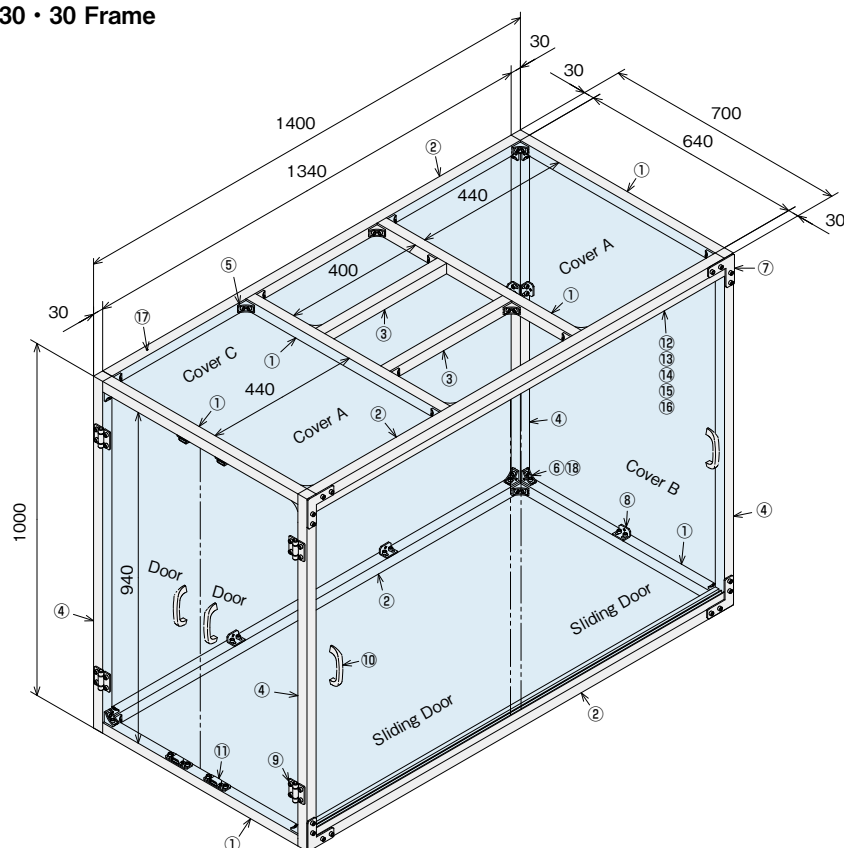
**EASY To Check,
EASY To Order,
EASY To Assemble.**



**Please contact to SUS
in order to make your own image.**

Reference Example of Free Unit

SF-30 • 30 Frame



No.	Name	Quantity
1	SF2-30•30 640L	6
2	SF2-30•30 1340L	4
3	SF2-30•30 400L	2
4	SF2-30•30 1000L	4
5	D Bracket S Kit	22
6	D Bracket S Kit with Tap	8
7	Plate Bracket S-L Kit	4
8	Cover Support S Kit	10
9	Fixed Hinge S Kit	4
10	Pull A	4
11	Magnet Catch N	4
12	Sliding Door's Rail 1340L	2
13	Slide Spacer	2
14	Plate	6
15	T Nut S M6	12
16	Hexagon Socket Bolt M6×10	12
17	T Nut S M5	10
18	Truss Screw	18
19	Sliding Door Aclyc t = 5 Clear	2
20	Door Aclyc t = 5 Clear	2
21	Cover A Aclyc t = 5 Clear	2
22	Cover B Aclyc t = 5 Clear	1
23	Cover C Aclyc t = 5 Clear	1

No.	Item No.	Name	Quantity	Note
1	SFF-324	SF-30 • 30 L = 640	6	
2	SFF-324	SF-30 • 30 L = 1340	4	
3	SFF-324	SF-30 • 30 L = 400	2	
4	SFF-324	SF-30 • 30 L = 1000	4	
5	SFK-018	D Bracket S Kit	22	
6	SFK-019	D Bracket S Kit with Tap	8	
7	SFK-104	Plate Bracket S-L Kit	4	
8	SFK-K02	Cover Support S Kit	10	
9	SFK-221	Fixed Hinge S Kit	4	
10	SFA-301	Pull A	4	
11	SFA-40A	Magnet Catch J	4	
12	SFF-R04	Sliding Door's Rail L = 1340	2	
13	SFA-107	Slide Spacer L = 2000	2	
14	SFA-502	Plate (For Sliding Door's Rail)	6	
15	SFB-002	T Nut S (M6)	12	
16	SFB-561	Hexagon Socket Bolt (Uni-Chrome) M6×10	12	
17	SFB-001	T Nut S (M5)	10	
18	SFB-558	Truss Screw M5×10	18	
19		Sliding Door 914×685 (Drilling included)	2	Aclyc t = 5 Clear
20		Door 938×317 (Drilling included)	2	Aclyc t = 5 Clear
21		Cover A 694×494 (Drilling included)	2	Aclyc t = 5 Clear
22		Cover B 998×638 (Drilling included)	1	Aclyc t = 5 Clear
23		Cover C 1338×998 (Drilling included)	1	Aclyc t = 5 Clear

SF20

S Size

SF30

S Size

SF40-45

L Size

Complex Parts

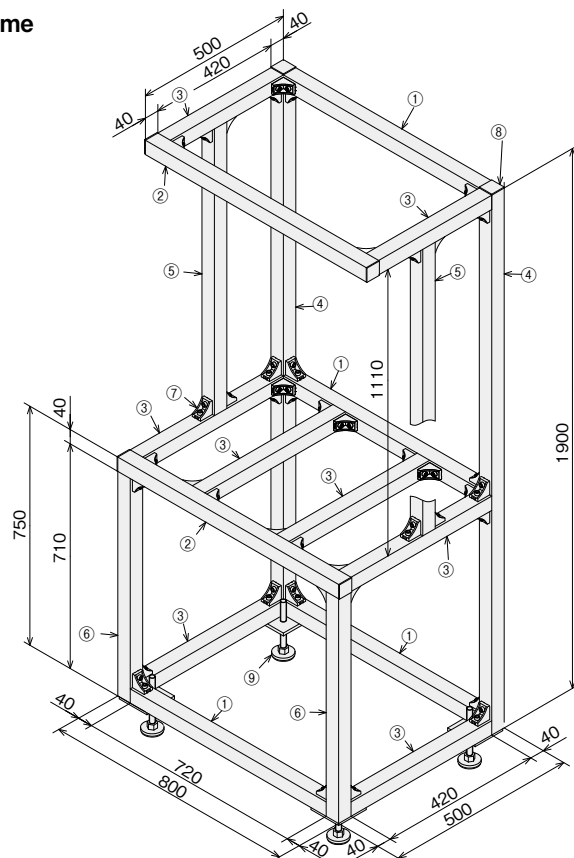
Door - Panel
Clean Equipment

Technical Data

Technical Data Free Unit

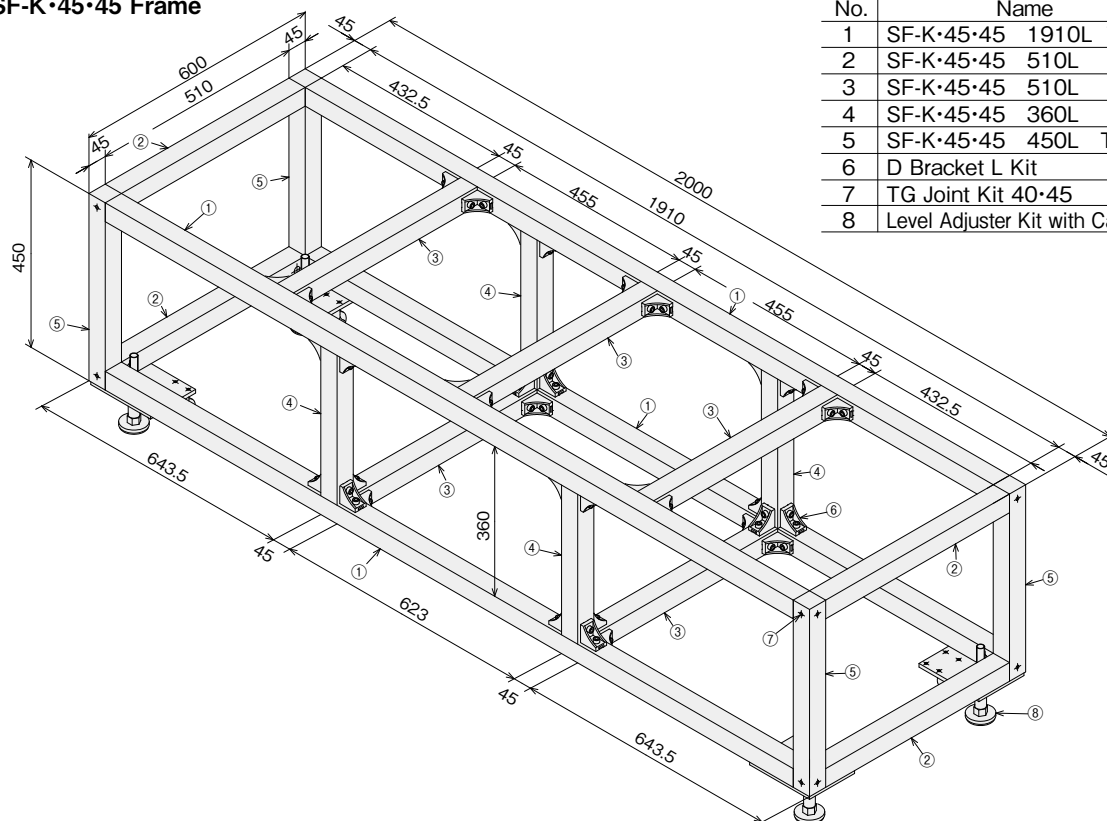
Reference Example of Free Unit

SF2-40•40 Frame



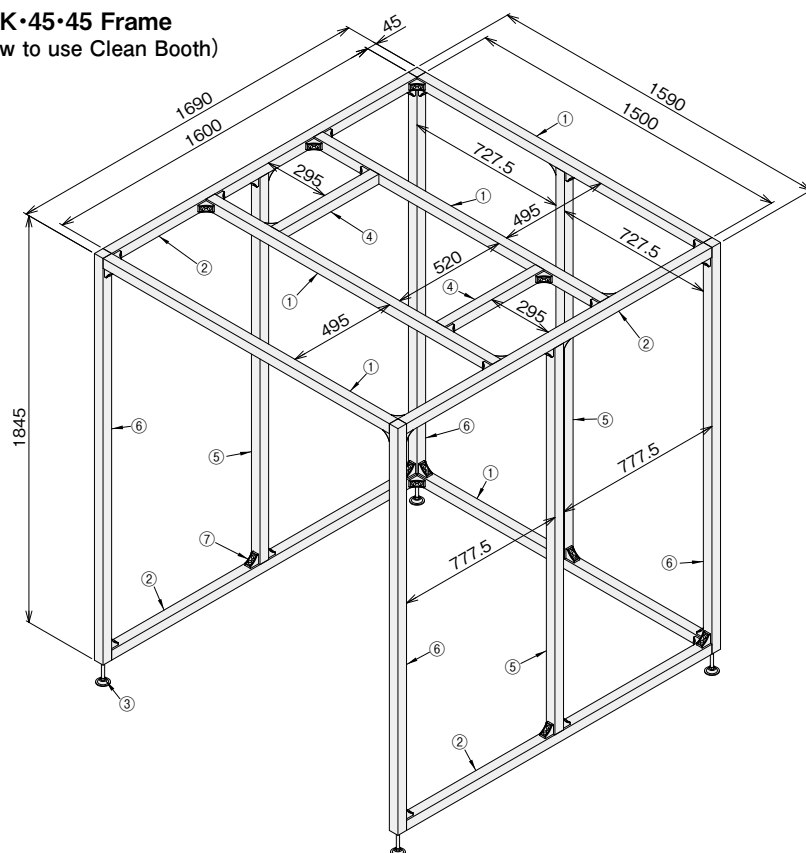
No.	Name	Quantity
1	SF2-40•40 720L	4
2	SF2-40•40 800L	2
3	SF2-40•40 420L	8
4	SF2-40•40 1900L	2
5	SF2-40•40 1110L	2
6	SF2-40•40 710L	2
7	D Bracket L Kit	48
8	Frame Cap 4040	6
9	Level Adjuster Kit L	4

SF-K•45•45 Frame



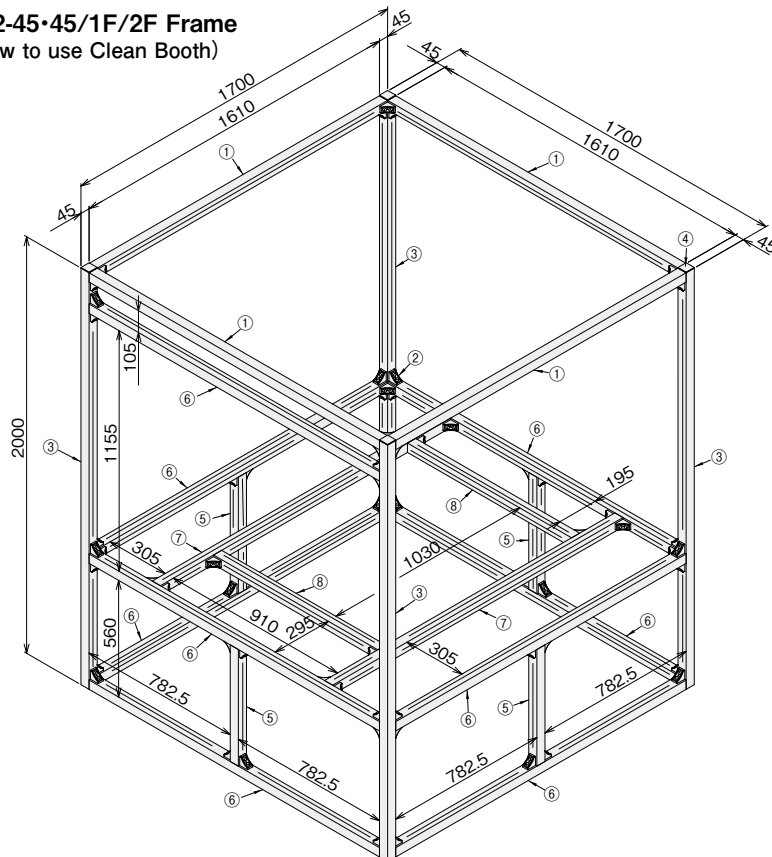
No.	Name	Quantity
1	SF-K•45•45 1910L TW	4
2	SF-K•45•45 510L TW	4
3	SF-K•45•45 510L	5
4	SF-K•45•45 360L	4
5	SF-K•45•45 450L TGM	4
6	D Bracket L Kit	40
7	TG Joint Kit 40•45	16
8	Level Adjuster Kit with Caster L	4

SF-K·45·45 Frame (How to use Clean Booth)



No.	Name	Quantity
1	SF-K·45·45 1500L	5
2	SF-K·45·45 1600L	4
3	Adjuster M12	4
4	SF-K·45·45 520L	2
5	SF-K·45·45 1755L	3
6	SF-K·45·45 1845L TR	4
7	D Bracket L Kit	42

SF2-45·45/1F/2F Frame (How to use Clean Booth)



No.	Name	Quantity
1	SF2-45·45·2F 1610L	4
2	D Bracket L Kit	72
3	SF2-45·45·2F 2000L	4
4	Frame Cap 45·45(Black)	4
5	SF2-45·45·1F 560L	4
6	SF2-45·45·1F 1610L	9
7	SF2-45·45 1610L	2
8	SF2-45·45 910L	2

SF20

SS Size

SF30

S Size

SF40

45 L Size

Complex Parts

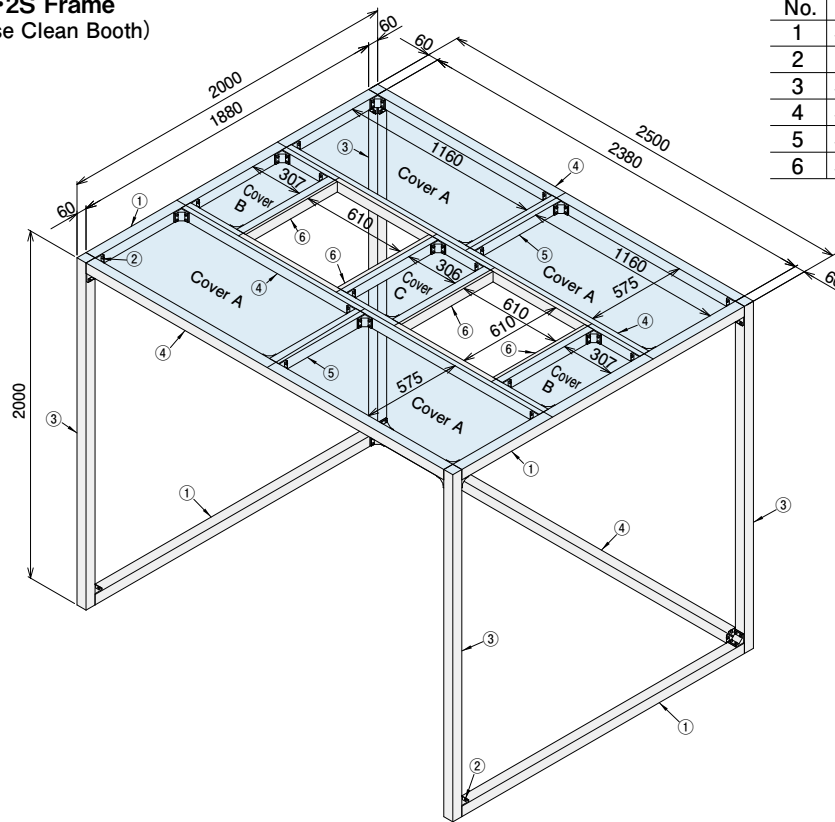
Door Panel
Clean Equipment

Technical Data

Technical Data Free Unit

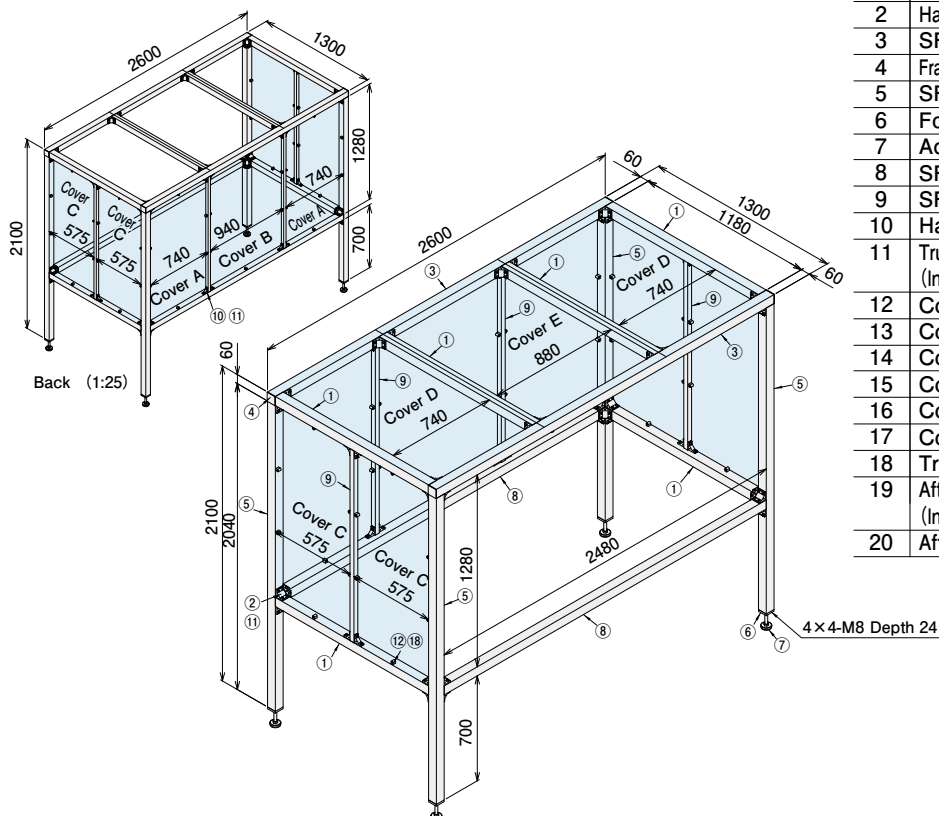
Reference Example of Free Unit

SF-60•60•2S Frame
(How to use Clean Booth)



No.	Name	Quantity
1	SF-60•60•2S 1880L	4
2	Hard Bracket S3060 Kit	44
3	SF-60•60•2S 2000L	4
4	SF-60•60•2S 2380L	5
5	SF-60•60•2S 575L	2
6	SF-60•60•2S 610L	4

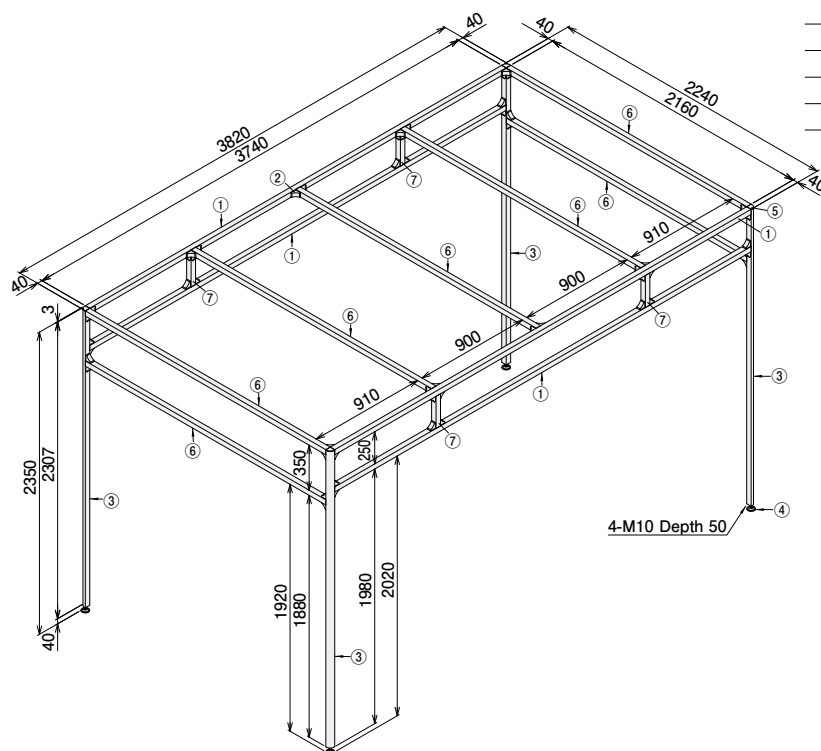
SF-60•60•2S Frame
(How to use Clean Booth)



No.	Name	Quantity
1	SF-60•60•2S 1180L	6
2	Hard Bracket S3060 Kit with Tap	40
3	SF-60•60•2S 2600L	2
4	Frame Cap 60•60•2S (Light Gray)	4
5	SF-60•60•2S 2040L TL	4
6	Foot Base 60602S	4
7	Adjuster M16	4
8	SF-60•60•2S 2480L	2
9	SF2-30•30 1280L	4
10	Hard Bracket S Kit with Tap	16
11	Truss Screw M5×10 (Include to install Cover D and E)	52
12	Cover Holder S	42
13	Cover A	2
14	Cover B	1
15	Cover C	4
16	Cover D	2
17	Cover E	1
18	Truss Screw M5×15	42
19	After Nut S M5 (Include to install Cover D and E)	24
20	After Nut Support S (50 pieces)	1

SF2-40•40

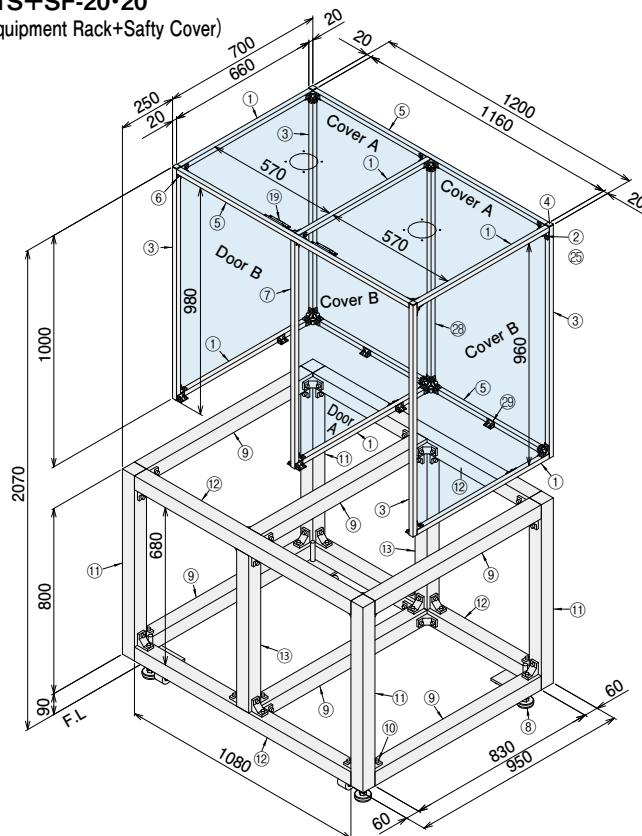
(How to use Clean Booth)



No.	Name	Quantity
1	SF2-40•40 3740L	4
2	D Bracket L Kit	60
3	SF-40•40•R 2307L TL50	4
4	Level Adjuster(KC-280-4-Takigen)	4
5	Frame Cap 40•40•R(Black)	4
6	SF2-40•40 2160L	7
7	SF2-40•40 250L	4

SF-60•60•1S+SF-20•20

(How to use Equipment Rack+Safty Cover)



No.	Name	Quantity
1	SF-20•20 660L	6
2	Hard Bracket SS Kit with Tap	40
3	SF-20•20 1000L	4
4	Frame Cap 20•20(Black)	12
5	SF-20•20 1160L	3
6	Blind Bracket SS	4
7	SF-20•20 980L	1
8	Level Adjuster Kit with Caster L	4
9	SF-60•60•1S 830L	6
10	Hard Bracket L Kit	40
11	SF-60•60•1S 800L	4
12	SF-60•60•1S 1080L	4
13	SF-60•60•1S 680L	2
14	SF-20•20 524L	4
15	SF-20•20 572L	4
16	Pull A Type	2
17	Flag Hinge SS-R Kit	2
18	Flag Hinge SS-L Kit	2
19	ML Bracket SS Kit	2
20	Truss Screw M6×10	4
21	Cover A	2
22	Cover B	3
23	Cover C	2
24	Cover D	2
25	Truss Screw M5×10	36
26	Cover Holder SS(To install Cover)	66
27	Truss Screw M5×15(To install Cover)	66
28	SF-20•20 960L	1
29	Angle Bracket SS2040 Kit	10

Technical Data Material Property

Material Property

6061: Heat-treated type corrosive-resistant alloy. It's used for bolt and rivet component because the welded joint's strength is low, though it has pretty high bearing value by T6 treatment.

SF series 6N01: Alloy with moderate strength for extrusion. With the intermediate strength between 6061 and 6063, it has good property for extrusion and press-hardening heat treatment. Therefore, big and thin material with complicated sectional shape can be produced. It's also good in corrosive-resistance and weldability.

6063: Representative alloy for extrusion. Although the strength is lower than 6061, it has good property for extrusion. Complicated sectional shape can be produced and it's good in corrosive-resistance and for surface treatment.

Aluminum Material Data

SUS will use both materials depending on Usage		
Material	A6N01SS-T5	A6063S-T5
Tensile Strength	270N/mm ²	187N/mm ²
Bearing Force	225N/mm ²	147N/mm ²
Longitudinal Elastic Modulus	69972N/mm ²	68600N/mm ²
Hardness	Brinell Hardness 88HB	Brinell Hardness 60HB
Treatment	Anodizing	Thickness: More than 9 μm

Frame Material Data

● Technical Data Table

Aluminum Frame	Geometrical Moment of Inertia ×10 ⁴ mm ⁴		Section Modulus ×10 ³ mm ³		I _x × E ×10 ⁹ N·mm ²	I _y × E ×10 ⁹ N·mm ²	Cross Section mm ²	Unit Mass kg/m	Frame Slot Width mm
	I _x	I _y	Z _x	Z _y					
SF-20-20	0.74	0.74	0.74	0.74	0.52	0.52	182	0.49	6
SF-20-20-1F	0.83	0.75	0.78	0.75	0.58	0.52	194	0.52	6
SF-20-20-2F	0.81	0.81	0.79	0.79	0.57	0.57	195	0.53	6
SF-20-20-3F	0.81	0.89	0.78	0.89	0.57	0.62	208	0.56	6
SF-20-20-2H	0.74	0.89	0.74	0.89	0.52	0.62	200	0.54	6
SF-20-40	5.12	1.36	2.56	1.36	3.58	0.95	324	0.88	6
SF-20-40-1F	5.40	1.53	2.70	1.44	3.78	1.07	344	0.93	6
SF-20-60	15.97	1.97	5.30	1.97	11.17	1.38	465	1.26	6
SF-20-80	36.13	2.58	9.03	2.58	25.28	1.81	607	1.64	6
SF-40-40-2S	8.89	8.89	4.45	4.45	6.22	6.22	478	1.29	6
SF-40-40-2S-1F	9.78	9.32	5.08	4.66	6.84	6.52	522	1.41	6
SF-40-40-2S-2F	9.60	9.60	4.89	4.89	6.72	6.72	497	1.35	6
SF-40-60-SS	27.03	12.63	9.01	6.31	18.91	8.84	665	1.80	6
SF-40-80-SS	63.52	18.39	15.88	9.20	44.45	12.87	994	2.70	6
SF-20-40-40	6.61	6.61	3.82	3.82	4.63	4.63	429	1.16	6
SF-20-20-R	0.55	0.55	0.48	0.48	0.38	0.38	150	0.40	6
SF-20-DE30	0.80	0.98	0.60	0.77	0.56	0.69	228	0.61	6
SF-20-DE45	0.82	0.92	0.59	0.69	0.57	0.64	221	0.59	6
SF-20-DE60	0.86	0.92	0.63	0.73	0.60	0.64	227	0.61	6
SF-25-25	1.64	1.64	1.31	1.31	1.15	1.15	288	0.78	6
SF2-30-30	2.84	2.84	1.89	1.89	1.99	1.99	332	0.90	8
SF2-30-30-1F	3.03	2.76	1.98	1.84	2.12	1.93	339	0.92	8
SF2-30-30-2F	3.05	3.05	1.96	1.96	2.13	2.13	351	0.95	8
SF2-30-30-3F	2.99	3.24	1.91	2.16	2.09	2.27	361	0.98	8
SF2-30-30-2H	2.69	3.23	1.79	2.15	1.88	2.26	345	0.93	8
SF2-30-60	20.56	5.33	6.85	3.56	14.39	3.73	592	1.60	8
SF2-30-60-1F	20.92	5.81	6.97	3.75	14.64	4.07	615	1.66	8
SF-30-90	66.26	8.44	14.72	5.62	46.36	5.91	905	2.44	8
SF-30-120	152.58	11.24	25.43	7.49	106.76	7.86	1191	3.22	8
SF-30-60-2H	21.23	6.23	7.08	4.21	14.86	4.36	631	1.70	8
SF-K-30-30	2.38	2.38	1.59	1.59	1.67	1.67	270	0.73	8
SF-K-30-60	16.68	4.63	5.56	3.09	11.67	3.24	483	1.30	8
SF-50-50-2S	21.67	21.67	8.67	8.67	15.16	15.16	859	2.32	8
SF-50-50-2S-1F	22.23	21.40	8.87	8.56	15.55	14.97	862	2.33	8
SF-50-50-2S-2F	22.26	22.26	8.77	8.77	15.58	15.58	874	2.36	8
SF-50-100-2S	153.40	42.48	30.68	16.99	107.34	29.72	1614	4.36	8

● Technical Data Table

Aluminum Frame	Geometrical Moment of Inertia $\times 10^4 \text{mm}^4$		Section Modulus $\times 10^3 \text{mm}^3$		$I_x \times E$ $\times 10^9 \text{N} \cdot \text{mm}^2$	$I_y \times E$ $\times 10^9 \text{N} \cdot \text{mm}^2$	Cross Section mm^2	Unit Mass kg/m	Frame Slot Width mm
	I_x	I_y	Z_x	Z_y					
SF-35-35	5.12	5.12	2.93	2.93	3.58	3.58	412	1.11	8
SF-35-35-1F	4.98	5.17	2.84	2.92	3.48	3.62	394	1.06	8
SF-35-35-2F	5.37	5.37	2.98	2.98	3.76	3.76	405	1.09	8
SF-35-35-2H	4.83	5.23	2.76	2.99	3.38	3.66	376	1.02	8
SF-35-70	35.09	9.04	10.03	5.16	24.55	6.33	667	1.80	8
SF-35-70-1F	33.94	9.47	9.70	5.36	23.75	6.63	659	1.78	8
SF-35-70-2F	34.26	9.42	9.79	5.27	23.97	6.59	656	1.77	8
SF-60-60-2S	41.38	41.38	13.79	13.79	28.95	28.95	971	2.62	8
SF-60-60-2S-1F	45.34	43.31	14.65	14.44	31.73	30.30	1071	2.89	8
SF-60-60-2S-2F	43.75	43.75	14.66	14.66	30.61	30.61	1011	2.73	8
SF-60-90	111.61	52.65	24.80	17.56	78.10	36.84	1156	3.12	8
SF-60-120	242.90	65.97	40.48	21.99	169.96	46.16	1526	4.12	8
SF-30-60-60	27.28	27.28	7.88	7.88	19.09	19.09	863	2.33	8
SF-30-30-R	2.42	2.42	1.53	1.53	1.69	1.69	305	0.82	8
SF-30-DE30	3.15	3.86	1.58	2.00	2.20	2.70	412	1.11	8
SF-30-DE45	3.21	3.72	1.56	1.86	2.25	2.60	401	1.08	8
SF-30-DE60	3.33	3.70	1.67	1.89	2.33	2.59	410	1.10	8
SF2-40-40	10.48	10.48	5.24	5.24	7.33	7.33	643	1.74	10
SF2-40-40-1F	9.76	10.08	4.69	5.04	6.83	7.05	704	1.90	10
SF2-40-40-2F	9.66	9.66	4.74	4.74	6.76	6.76	589	1.59	10
SF2-40-40-3F	9.97	10.51	4.94	5.25	6.98	7.35	618	1.67	10
SF2-40-40-2H	9.74	10.44	4.87	5.22	6.82	7.31	612	1.65	10
SF2-40-80	72.30	19.92	18.07	9.96	50.59	13.94	1114	3.01	10
SF2-40-80-1F	70.50	20.32	17.62	10.14	49.33	14.22	1105	3.11	10
SF-40-160	498.81	38.58	62.35	19.29	349.03	27.00	2049	5.54	10
SF-K-40-40	7.50	7.50	3.75	3.75	5.25	5.25	492	1.33	10
SF-K-40-80	55.37	14.44	13.84	7.22	38.74	10.10	856	2.31	10
SF-80-80	129.84	129.84	32.46	32.46	90.85	90.85	1703	4.60	10
SF-80-160	1000.9	295.39	125.11	73.84	700.35	206.69	3891	10.51	10
SF-80-80-H	182.84	182.84	45.71	45.71	127.94	127.94	2616	7.06	10
SF-90-90-H	303.40	303.40	67.42	67.42	212.30	212.30	3270	8.83	10
SF-40-80-80	94.15	94.15	27.56	27.56	65.88	65.88	1550	4.19	10
SF-40-40-R	7.82	7.82	3.53	3.53	5.47	5.47	566	1.53	10
SF-40-DE30	9.89	10.64	3.73	4.20	6.92	7.45	694	1.88	10
SF-40-DE45	9.87	10.37	3.59	3.99	6.91	7.26	676	1.83	10
SF-40-DE60	9.99	10.53	3.74	4.14	6.99	7.37	679	1.84	10
SF2-45-45	15.24	15.24	6.78	6.78	10.66	10.66	783	2.10	10
SF2-45-45-1F	13.91	14.65	5.90	6.51	9.73	10.25	732	1.98	10
SF2-45-45-2F	14.09	14.09	6.14	6.14	9.86	9.86	717	1.94	10
SF2-45-45-3F	14.41	15.02	6.39	6.67	10.08	10.51	736	1.99	10
SF2-45-45-2H	14.3	14.71	6.35	6.53	10.01	10.29	731	1.98	10
SF2-45-90	125.54	32.50	27.90	14.44	87.84	22.74	1543	4.17	10
SF2-45-90-1F	117.42	32.07	26.09	14.10	82.16	22.44	1438	3.88	10
SF-45-180	804.81	60.75	89.42	27	563.14	42.51	2636	7.12	10
SF-K-45-45	11.74	11.74	5.22	5.22	8.21	8.21	628	1.70	10
SF-K-45-45-1F	10.88	11.33	5.04	5.03	7.61	7.93	590	1.60	10
SF-K-45-45-2F	11.13	11.13	4.99	4.91	7.79	7.79	585	1.58	10
SF-K-45-90	87.17	22.87	19.37	10.17	60.99	16.00	1102	2.98	10
SF-90-90	204.97	204.97	45.55	45.55	143.42	143.42	2143	5.79	10
SF-90-180	2136.6	598.51	237.4	133	1495.02	418.79	6320	17.07	10
SF-45-90-90	149.53	149.53	28.83	28.83	104.63	104.63	2052	5.54	10
SF-45-45-R	11.33	11.33	4.52	4.52	7.93	7.93	664	1.79	10
SF-45-DE30	14.91	15.95	4.95	5.7	10.43	11.16	851	2.30	10
SF-45-DE45	14.73	15.49	4.72	5.36	10.31	10.84	821	2.22	10
SF-45-DE60	14.94	15.93	4.86	5.73	10.45	11.15	834	2.26	10
SF-60-60-1S	49.32	49.32	16.44	16.44	34.51	34.51	1380	3.73	10
SF-80-80-1S (L=4000)	90.46	90.46	16.35	16.35	63.30	63.30	1461	3.94	10

Steel Frame		$I \times E$ $\times 10^9 \text{N} \cdot \text{mm}^2$	Unit Mass kg/m
Equal Angle Iron	L30×30×t3	2.92	1.32
	L40×40×t5	11.15	2.95
	L50×50×t6	22.84	3.77
	L65×65×t6	60.51	5.91
	L75×75×t6	94.87	6.85
Square Iron	□50×50×t2.3	32.72	3.34
	□50×50×t3.2	41.98	4.50
	□60×60×t2.3	58.24	4.06
	□75×75×t2.3	11.75	5.14

 $I \times E$ = Geometrical Moment of Inertia $\text{mm}^4 \times$ Longitudinal Elastic Modulus N/mm^2

● Indication of Frame Selection

 $I_x \times E$ (Aluminum Frame) $\geq I_x \times E$ (Steel Frame)

 $I_y \times E$ (Aluminum Frame) $\geq I_y \times E$ (Steel Frame)

Technical Data Indication of Allowable Load

Indication of Frame's Allowable Load

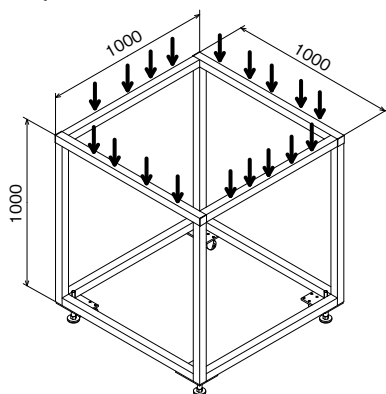
- Calculated as center-concentrated load by both ends supported beam.
- Assumed the load when flexure volume reaches 1/1000mm of the frame's length as the allowable load.

Name	Both Ends Supported	
	L=1000 Centralized Flexure 1mm	L=500 Centralized Flexure 0.5mm
	Allowable Load (N)	Allowable Load (N)
SF-2020	25	99
SF-2040 (Width)	45	181
SF-2040 (Height)	172	688
SF-2060 (Width)	66	265
SF-2060 (Height)	537	2147
SF-2080 (Width)	86	344
SF-2080 (Height)	1208	4832
SF-40402S	299	1194
SF-4060SS (Width)	424	1697
SF-4060SS (Height)	908	3631
SF-4080SS (Width)	614	2457
SF-4080SS (Height)	2125	8499
SF-204040	222	888
SF-2020R	18	74
SF-2525	55	221
SF2-3030	95	380
SF2-3060 (Width)	179	715
SF2-3060 (Height)	678	2714
SF-K3030	80	320
SF-K3060 (Width)	156	622
SF-K3060 (Height)	560	2241
SF-3090 (Width)	283	1134
SF-3090 (Height)	2226	8904
SF-30120 (Width)	376	1503
SF-30120 (Height)	5111	20442
SF-60602S	1390	5562
SF-6090 (Width)	1767	7067
SF-6090 (Height)	3728	14912
SF-60120 (Width)	2217	8867
SF-60120 (Height)	8162	32646
SF-306060	917	3666
SF-3030R	81	325
SF-50502S	725	2902
SF-501002S (Width)	1389	5555
SF-501002S (Height)	5048	20192

Name	Both Ends Supported	
	L=1000 Centralized Flexure 1mm	L=500 Centralized Flexure 0.5mm
	Allowable Load (N)	Allowable Load (N)
SF-3535	172	688
SF-3570 (Width)	304	1214
SF-3570 (Height)	1179	4714
SF2-4040	349	1397
SF2-4080 (Width)	665	2660
SF2-4080 (Height)	2415	9659
SF-40160 (Width)	1296	5183
SF-40160 (Height)	16753	67013
SF-K4040	252	1008
SF-K4080 (Width)	485	1940
SF-K4080 (Height)	1860	7439
SF-8080	4336	17344
SF-8080H	6130	24518
SF-9090H	10190	40761
SF-80160 (Width)	9921	39685
SF-80160 (Height)	33617	134467
SF-408080	3162	12649
SF-4040R	262	1049
SF2-4545	508	2033
SF2-4590 (Width)	1085	4338
SF2-4590 (Height)	4188	16753
SF-45180 (Width)	2040	8162
SF-45180 (Height)	27031	108123
SF-K4545	394	1576
SF-K4590 (Width)	768	3072
SF-K4590 (Height)	2927	11710
SF-9090	7026	28105
SF-90180 (Width)	20102	80408
SF-90180 (Height)	71761	287044
SF-459090	5024	20094
SF-4545R	381	1522
SF-60601S	1655	6619
SF-80801S	3038	12153

Indication of Unit's Allowable Load

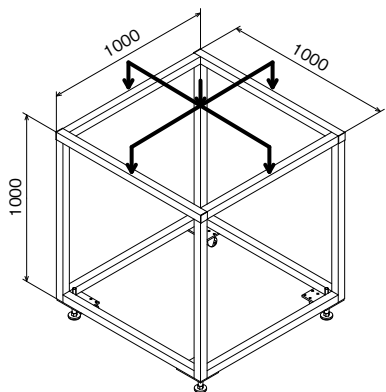
Uniformly-Distributed Load Loaded evenly to the frame



Condition: Calculated based on that each frame's flexure volume is 1mm at the center of the frame in the flat surface of 1000mm×1000mm.

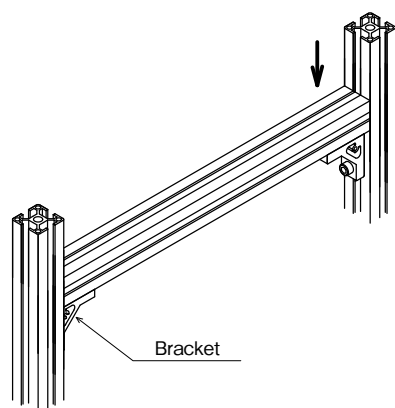
Name	Unit's Allowable Load L=1000	
	Uniformly-Distributed Load	Concentrated Load
	Allowable Load (N)	Allowable Load (N)
SF-2020	180	112
SF-2040 (Width)	279	174
SF-2040 (Height)	1079	674
SF-2060 (Width)	398	249
SF-2060 (Height)	3366	2104
SF-2080 (Width)	506	316
SF-2080 (Height)	7577	4736
SF-40402S	1835	1147
SF-4060SS (Width)	2552	1595
SF-4060SS (Height)	5578	3486
SF-4080SS (Width)	3617	2261
SF-4080SS (Height)	13054	8159
SF-204040	1364	853
SF-2020R	116	72
SF-2525	344	215
SF2-3030	590	369
SF2-3060 (Width)	1075	672
SF2-3060 (Height)	4212	2632
SF-K3030	512	320
SF-K3060 (Width)	995	622
SF-K3060 (Height)	3585	2241
SF-3090 (Width)	1651	1032
SF-3090 (Height)	13820	8637
SF-30120 (Width)	2117	1323
SF-30120 (Height)	31726	19829
SF-60602S	8365	5228
SF-6090 (Width)	10289	6431
SF-6090 (Height)	22428	14018
SF-60120 (Width)	12485	7803
SF-60120 (Height)	49100	30687
SF-306060	5514	3446
SF-3030R	505	315
SF-50502S	4411	2757
SF-501002S (Width)	8000	5000
SF-501002S (Height)	30692	19183

Concentrated Load Loaded to the center of the frame



Name	Unit's Allowable Load L=1000	
	Uniformly-Distributed Load	Concentrated Load
	Allowable Load (N)	Allowable Load (N)
SF-3535	1101	688
SF-3570 (Width)	1943	1214
SF-3570 (Height)	7543	4714
SF2-4040	2146	1341
SF2-4080 (Width)	3916	2447
SF2-4080 (Height)	14837	9273
SF-40160 (Width)	6966	4354
SF-40160 (Height)	102932	64333
SF-K4040	1548	967
SF-K4080 (Width)	2856	1785
SF-K4080 (Height)	11426	7141
SF-8080	25531	15957
SF-8080H	36091	22557
SF-9090H	65217	40761
SF-80160 (Width)	53336	33335
SF-80160 (Height)	180724	112952
SF-408080	18619	11637
SF-4040R	1612	1007
SF2-4545	3106	1941
SF2-4590 (Width)	6316	3948
SF2-4590 (Height)	25599	15999
SF-45180 (Width)	10708	6692
SF-45180 (Height)	165212	103258
SF-K4545	2408	1505
SF-K4590 (Width)	4474	2796
SF-K4590 (Height)	17892	11183
SF-9090	40921	25576
SF-90180 (Width)	105495	65934
SF-90180 (Height)	417936	261210
SF-459090	29257	18286
SF-4545R	2326	1454
SF-60601S	9955	6222
SF-80801S	19445	12153

Indication of Bracket's Allowable Load (Slip)



Size	Bracket Name	Allowable Load (N)
SS	D Bracket SS	833
	D Bracket 2040	1887
	Hard Bracket SS	833
	Hard Bracket SSG	833
	Hard Bracket SSW 2020	1290
	Hard Bracket SS 2040	1470
	Hard Bracket SSG 2040	1470
	Hard Bracket SSW 2040	2233
	Hard Bracket SS 2060	1960
	Hard Bracket SSG 2060	1960
	Hard Bracket SSW2060	4360
	Angle Bracket SS	686
	Angle Bracket Hard SS	686
	Angle Bracket SS 2040	1176
	Angle Bracket SS 2060	1617
	QC Joint SS	345
	S Blind Bracket SS	196
S	D Bracket S	1176
	D Bracket 3060	2825
	Hard Bracket S	1176
	Hard Bracket SG	1176
	Hard Bracket SW 3030	3035
	Hard Bracket S 3060	1960
	Hard Bracket SG 3060	1960
	Hard Bracket SW 3060	4307
	Hard Bracket S 3090	2744
	Hard Bracket SG 3090	2744
	Hard Bracket S 50	1960
	Hard Bracket SG 50	1960
	Hard Bracket SW 3090	5737
	Angle Bracket S	980
	Angle Bracket Hard S	980
	Angle Bracket S 3060	1568
	Angle Bracket S 3090	2352
	Angle Bracket S 50	1568
	S Blind Bracket S	686
	QC Joint S	395
	TG Joint 30	945
	S Double Joint 30	1200
	KF Joint	535

Size	Bracket Name	Allowable Load (N)
L	D Bracket L	2058
	D Bracket 4080	5055
	D Bracket 4590	5055
	Hard Bracket L	2058
	Hard Bracket LG	2058
	Hard Bracket LW	5422
	Hard Bracket L 4080	2940
	Hard Bracket G 80	3920
	Hard Bracket G 80160	7056
	Hard Bracket LW4080	8542
	Hard Bracket GW80	8542
	Hard Bracket L 4590	2940
	Hard Bracket G 90	3920
	Hard Bracket G 90180	7056
	Hard Bracket LW4590	8542
	Hard Bracket GW90	8542
	Angle Bracket L 40	1666
	Angle Bracket Hard L40	1666
	Angle Bracket L 4080	2352
	Angle Bracket L 45	1666
	Angle Bracket Hard L45	1666
	Angle Bracket L 4590	2352
	Offset Angle L4080	2352
	Offset Angle L4590	2352
	S Blind Bracket L	1274
	QC Joint L	800
	TG Joint 4045	1560
	TG Joint 60	1560
	TG Joint 80 Kit (When using □80 Frame)	7687
	S Double Joint 40	1200
	S Double Joint 45	1200
	S Double Joint 60	1200
	S Double Joint 80	1200

SF20

SS Size

SF30

S Size

SF40-45

L Size

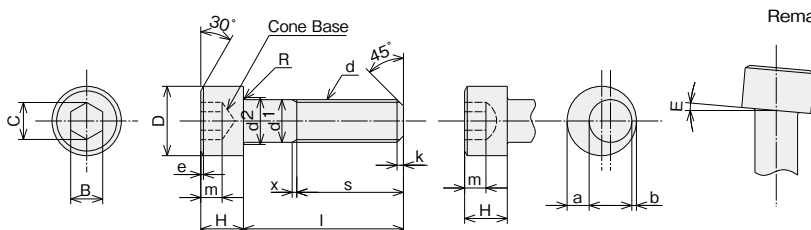
Complex Parts

Door Panel
Clean Equipment

Technical Data

Technical Data Hexagon Socket Bolt, SI Unit List

Hexagon Socket Bolt Excerpt from JISB1176 (1988)

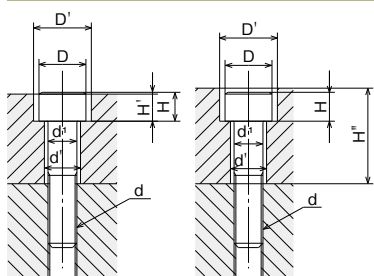


- Remarks
1. Don't use the staff which the name is in parenthesis as possible as you can.
 2. Developed length (l), length of thread part (s) and length of incomplete thread is by appendix table 2.
 3. Base shape of hexagonal hole can be circular cone or circle.
 4. There must not have significant eccentric to the hexagonal hole.
 5. Inner chamfering can be done to the hexagonal hole.
 6. Put parallel or slash knurling to the side of the head. However, knurling is not needed by specification. In this case, allowable difference of D is h13 according to JIS B 0401 (Dimensional tolerance and engaging).
 7. Spanner for this bolt is JIS B 4648 (Hexagonal bar spanner).

Unit mm

Size of Screw (d)		M3×0.5	M4×0.7	M5×0.8	M6	M8	M10	M12	(M14)	M16	(M18)	M20	(M22)	M24	(M27)	M30
Pitch P		0.5	0.7	0.8	1	1.25	1.5	1.75	2	2	2.5	2.5	2.5	3	3	3.5
d ₁	Basic Dimension	3	4	5	6	8	10	12	14	16	18	20	22	24	27	30
	Allowable Tolerance	0 -0.1				0 -0.15				0 -0.2						
D	Basic Dimension	5.5	7	8.5	10	13	16	18	21	24	27	30	33	36	40	45
	Allowable Tolerance	0 -0.3	0 -0.36			0 -0.43			0 -0.52			0 -0.62				
H	Basic Dimension	3	4	5	6	8	10	12	14	16	18	20	22	24	27	30
	Allowable Tolerance	0 -0.25	0 -0.3			0 -0.36			0 -0.43			0 -0.52				
e	About	0.2	0.3	0.3	0.4	0.5	0.6	0.7	0.8	1	1	1	1	1	1.5	1.5
B	Basic Dimension	2.5	3	4	5	6	8	10	12	14	14	17	17	19	19	22
	Allowable Tolerance	+0.080 +0.020		+0.105 +0.030			+0.130 +0.040			+0.230 +0.050				+0.275 +0.065		
C	About	2.9	3.6	4.7	5.9	7	9.4	11.7	14	16.3	16.3	19.8	19.8	22.1	22.1	25.6
m	MIN	1.6	2.2	2.5	3	4	5	6	7	8	9	10	11	12	13.5	15
R	MIN	0.1	0.2	0.2	0.25	0.4	0.4	0.6	0.6	0.6	0.6	0.8	0.8	0.8	1	1
da	MAX	3.6	4.7	5.7	6.8	9.2	11.2	14.2	16.2	18.2	20.2	22.4	24.4	26.4	30.4	33.4
k	About	0.6	0.8	0.9	1	1.2	1.5	2	2	2	2.5	25	25	3	3	3.5
a—b	MAX	0.2	0.2	0.3	0.3	0.4	0.5	0.7	0.7	0.8	0.9	0.9	1.1	1.2	1.3	1.5
E	MAX	1°														

Hexagon Socket Bolt Drilling Dimension (Reference Value)



		Unit mm														
Size of Screw (d)		M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27	M30
d ₁		3	4	5	6	8	10	12	14	16	18	20	22	24	27	30
d'		3.4	4.5	5.5	6.6	9	11	14	16	18	20	22	24	26	30	33
D		5.5	7	8.5	10	13	16	18	21	24	27	30	33	36	40	45
D'		6.5	8	9.5	11	14	17.5	20	23	26	29	32	35	39	43	48
H		3	4	5	6	8	10	12	14	16	18	20	22	24	27	30
H'		2.7	3.6	4.6	5.5	7.4	9.2	11	12.8	14.5	16.5	18.5	20.5	22.5	25	28
H''		3.3	4.4	5.4	6.5	8.6	10.8	13	15.2	17.5	19.5	21.5	23.5	25.5	29	32

Remarks Bolt Hole Dimension (d') above is according to JIS B 1001.

List of SI Unit for Main Amount

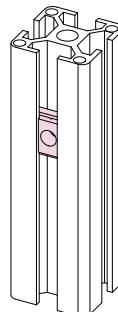
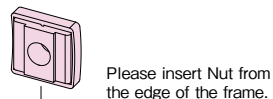
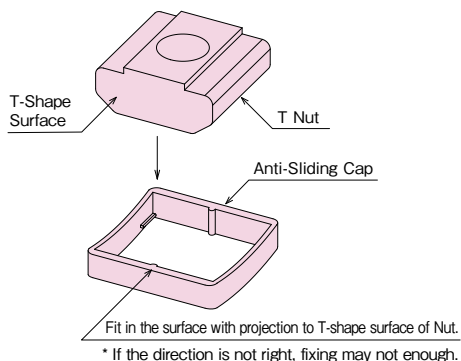
Name of Amount	Existing Unit	SI Unit	Equivalent
Length	μ	μm	1 μ=1 μm
	Å		1 Å=10 ⁻¹⁰ m
	ft	m	1 ft=3.048×10 ⁻¹ m
	in	(Å can be used together)	1 in=2.54×10 ⁻² m
	mile		1 mile=1.60934×10 ³ m
Area	a		1 a=10 ² m ²
	yd ²		1 yd ² =2.01168×10 ² m ²
	ft ²	m ²	1 ft ² =9.29030×10 ⁻² m ²
	in ²	(a can be used together)	1 in ² =6.4516×10 ⁻⁴ m ²
	acre		1 acre=4.04686×10 ³ m ²
	mile ²		1 mile ² =2.58999×10 ⁶ m ²
Volume	cc	cm ³	1 cc=1 cm ³
	L, l	dm ³ (L, l can be used together)	1 L=1 dm ³
	gal		1 gal=4.54609×10 ⁻³
	gal	m ³	1 gal=3.78541×10 ⁻³
	barrel		1 barrel=1.590×10 ⁻¹

Name of Amount	Existing Unit	SI Unit	Equivalent
Weight	t	kg(t can be used together)	1 t=10 ³ kg
	car	mg	1 car=200mg
Density·Concentration	kgf·s ² /m ⁴	kg/m ³	1 kgf·s ² /m ⁴ =9.80665kg/m ³
Momentum	kgf·s	kg·m/s	1 kgf·s=9.80665kg·m/s
Moment of Inertia	kgf·m·s ²	kg·m ²	1 kgf·m·s ² =9.80665kg·m ²
Power	kgf	N	1 kgf=9.80665N
	dyn		1 dyn=10 ⁻⁵ N
Moment of Power	kgf·m	N·m	1 kgf·m=9.80665N·m
	kgf/cm ²		1 kgf/cm ² =9.80665×10 ⁴ Pa
Pressure	bar		1 bar=10 ⁵ Pa
	at(Technical Atmosphere)	Pa	1 at=9.80665×10 ⁴ Pa
	atm(Presure)	(bar can be used together)	1 atm=101325Pa
	mH ₂ O, mAg		1 mH ₂ O=9.80665×10 ³ Pa
	mmHg		1 mmHg=133.322Pa
	Torr		1 Torr=133.322Pa

Technical Data How to use Nut

How to use Nut

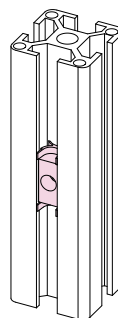
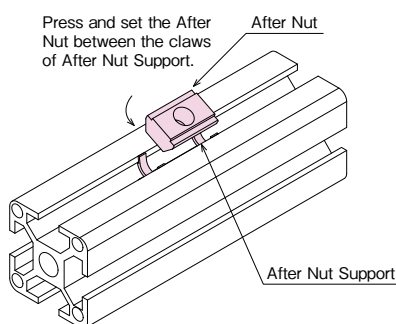
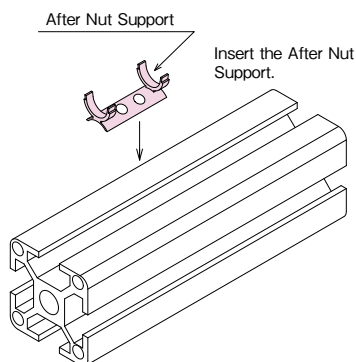
T Nut + Anti-Sliding Cap



for SF-20 Series	T Nut SS	P30
	Anti-Sliding Cap SS	
for SF-30 Series	T Nut S	P60
	Anti-Sliding Cap S	
for SF-40 Series	T Nut L	P98
	Anti-Sliding Cap L40	
for SF-45 Series	T Nut L	P98
	Anti-Sliding Cap L45	

It's hardly slide with Anti-sliding Cap.

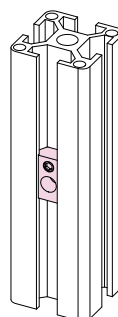
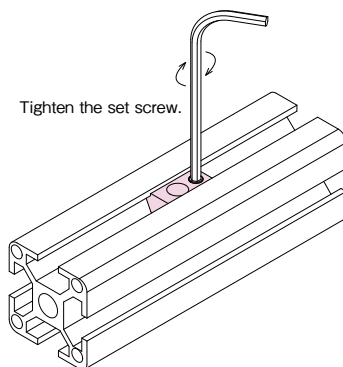
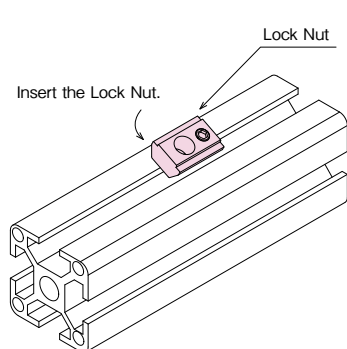
After Nut + After Nut Support



for SF-20 Series	After Nut SS	P30
	After Nut Support SS	
for SF-30 Series	After Nut S	P61
	After Nut Support S	
for SF-40-45 Series	After Nut L	P99
	After Nut Support L	

Nut can be positioned in the right place by After Nut Support, and it hardly displace because of the convenient lock function.

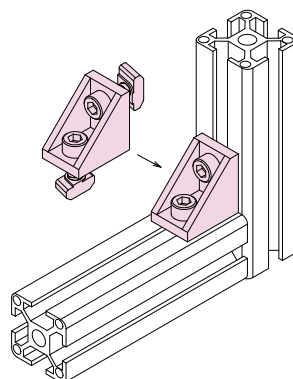
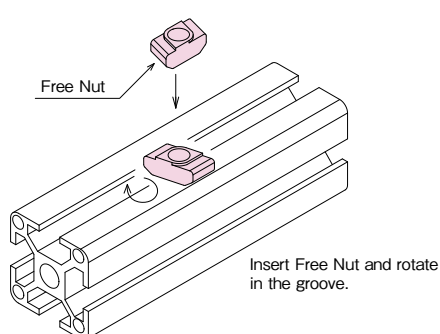
Lock Nut



for SF-20 Series	Lock Nut SS	P30
for SF-30 Series	Lock Nut S	P61
for SF-40-45 Series	Lock Nut L	P99

By tightening the set screw, position of the Nut is fixed and hardly moves. After Nut Support can also be used and hardly moves as a temporary setting.

Free Nut



for SF-20 Series	Free Nut SS	P30
for SF-30 Series	Free Nut S	P61
for SF-40-45 Series	Free Nut L	P100

Nut can be inserted in the condition that is remained in bracket, etc.

SF20

SS Size

SF30

S Size

SF40-45

L Size

Complex Parts

Door - Panel
Clean Equipment

Technical Data

Technical Data How to joint Bracket

QC Joint Kit

1 • Drill-processing for QC Joint is needed on one of the frames.	2 Insert QC Joint.
4 Tighten QC Joint and Bolt with Hexagonal Wrench.	3 Rotate QC Joint 90°, and connect to the QC-Processed Frame.

TG Joint Kit

1 • Tapping for bolt tightening is needed to one frame, and wrench hole processing is needed to another frame.	2 Put the Bolt for TG through the TG Plate, and fix temporary with spacing.
4 Tighten with Hexagonal Wrench and fix it.	3 Set the head of the bolt and TG Plate to another frame, and slide to the specific position.

Instruction for use of TG Joint

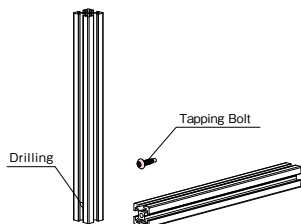
Set the rotation stopper to the top. Adjuster Plate S (Adjuster Caster Plate S) When using TG Joint Kit 30 with Adjuster Plate S and Adjuster Caster Plate S together, please pay attention to the direction of TG Plate.
--

Double Joint Kit

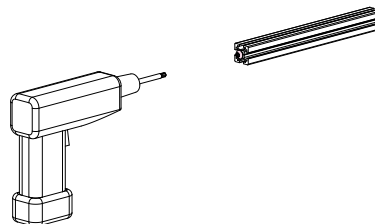
1 • Drilling is needed to one of the frames.	2 Insert T Nut and Bolt first. Frame ① Frame ②
4 Tighten with Hexagonal Wrench with adjusting the position.	3 Fix up Frame 2 to Frame 1, and slide T Nut and Bolt from both sides to connect to Double Joint. Frame ② Frame ①

Tapping Bolt

1 Drilling is needed to the frame which fixes with Tapping Bolt.

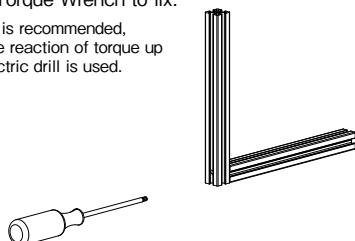


2 Fix Tapping Bolt temporary by Electric Driver.

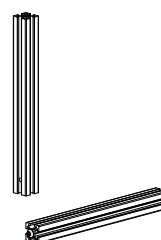


4 Tighten by Torque Wrench to fix.

* Manual tool is recommended, because the reaction of torque up is big if electric drill is used.

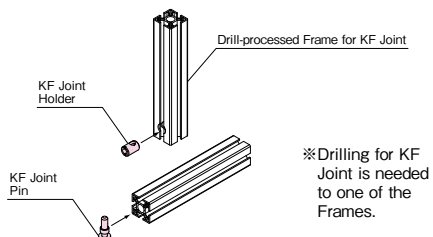


3 Insert the head of the bolt to another frame's groove, and slide to the specified position.

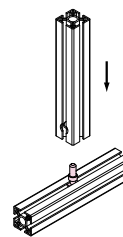


How to assemble KF Joint

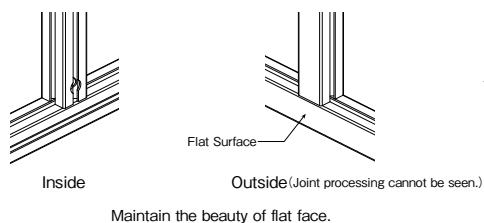
1 Drilling for KF Joint is needed to one of the frames.



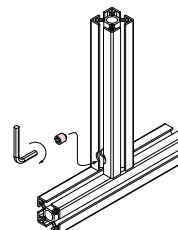
2 Put the frame to KF Joint pin.



4 Appearance from the opposite side is clear because the drilling for KF Joint is not penetrated.



3 Tighten set screw (sharp edge) by Hexagonal Wrench.



SF20
SS Size

SF30
S Size

SF40-45
L Size

Complex Parts

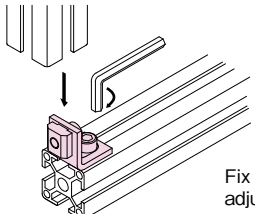
Door - Panel
Clean Equipment

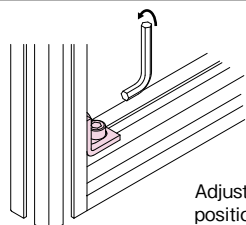
Technical Data

Each L-Shape Bracket

- 

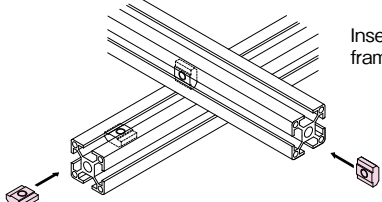
Fix bolt and Nut temporary to bracket.
- 

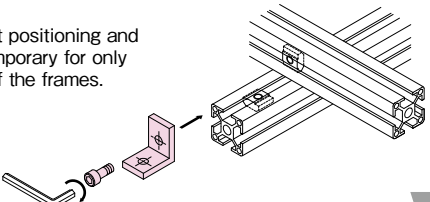
Insert the bracket kit to frame's groove.
- 

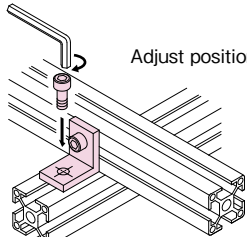
Fix temporarily, adjusting the bracket's position.
- 

Adjust the frame's position, and tighten finally.

Angle Bracket

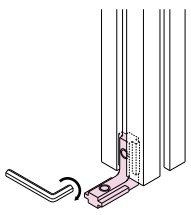
- 

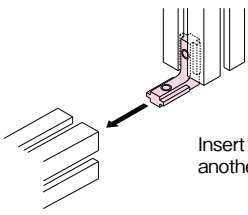
Insert T Nuts to both frames at first.
- 

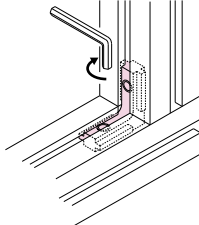
Adjust positioning and fix temporary for only one of the frames.
- 

Adjust position and tighten finally.

Blind Bracket

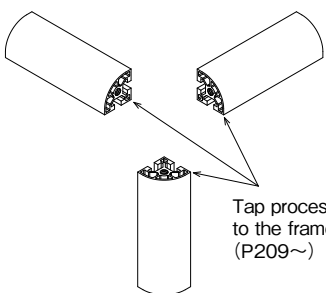
- 

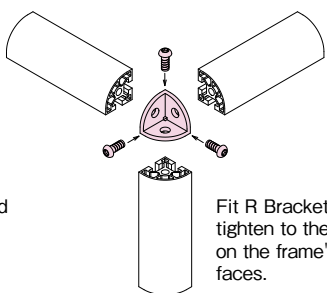
Fix Blind Bracket temporary to frame.
- 

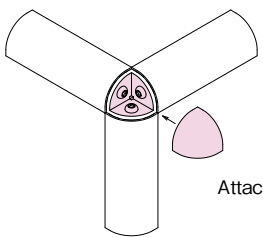
Insert the Blind Bracket fixed in 1 to another frame's groove.
- 

Position well and tighten the set screw by wrench.

R Bracket (Block Bracket)

- 

Tap processing is needed to the frame's end faces. (P209~)
- 

Fit R Bracket and tighten to the tap on the frame's end faces.
- 

Attach R Cap.



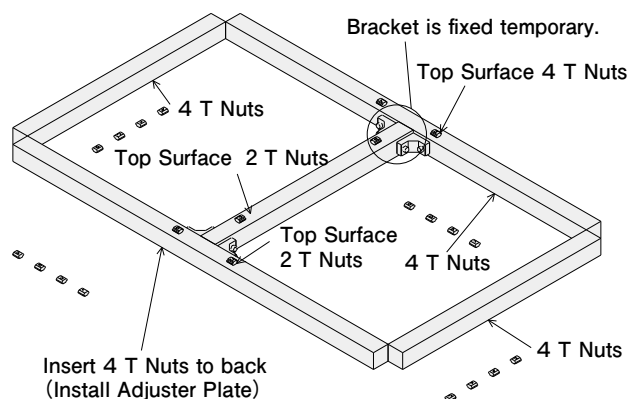
Technical Data How to Assemble SF Unit

How to Assemble SF Unit

Before Assembly | 1. Please assemble in wide space on flat floor. 2. Classify the Frames by dimensions and parts.

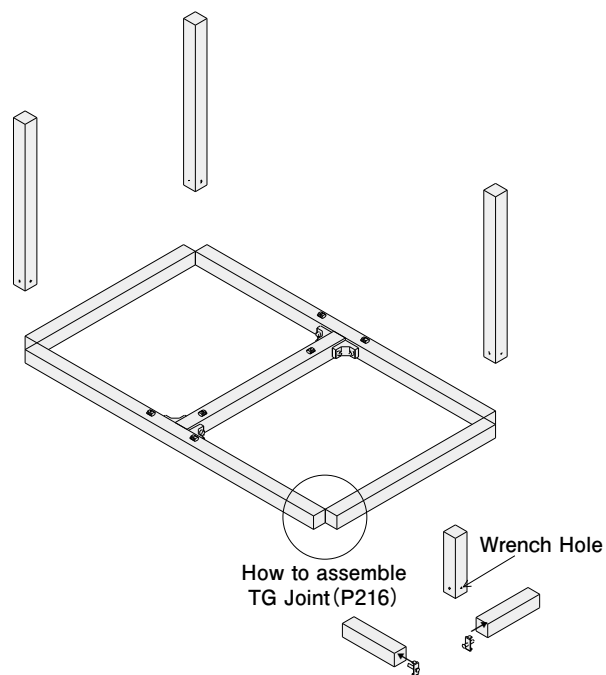
* Example of using TG Joint Kit and Hard Bracket

1 Base Assembly



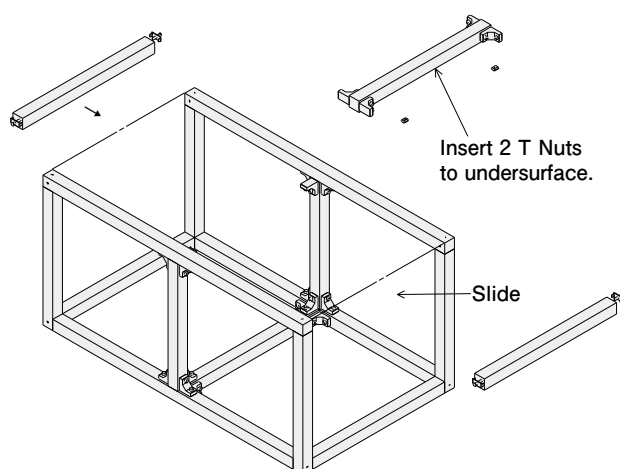
* Please don't forget to insert Nuts.

2 Put up poles

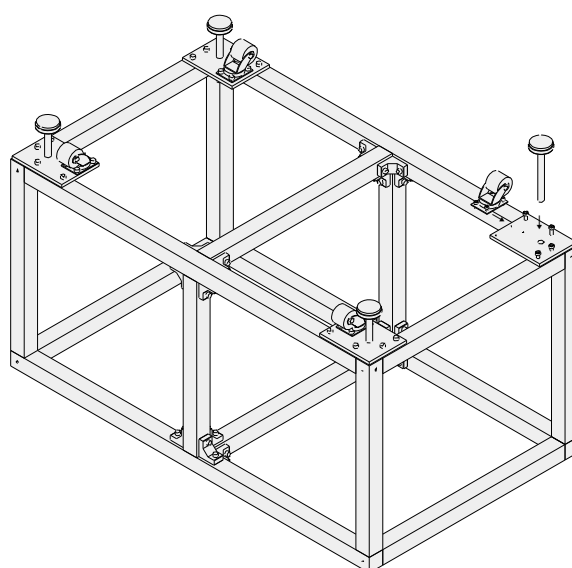


* Please confirm the directions.

5 Assemble top surface (2)



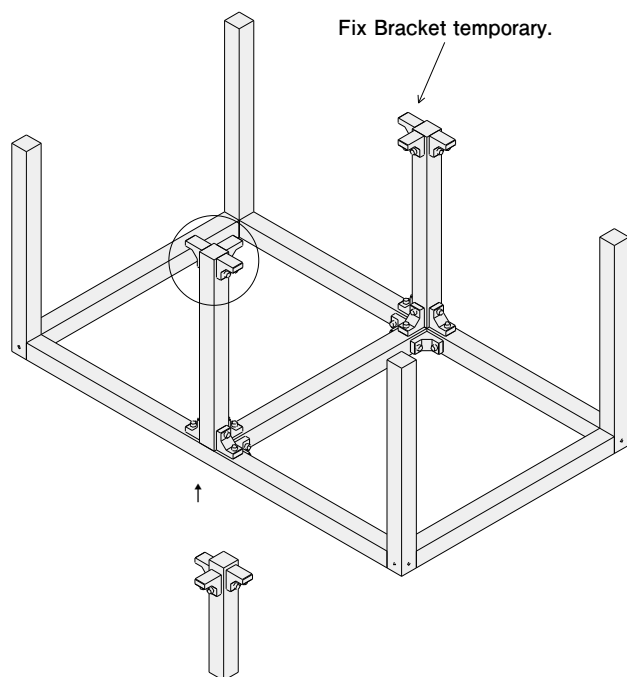
6 Turn unit upside-down, and install Adjuster and Caster



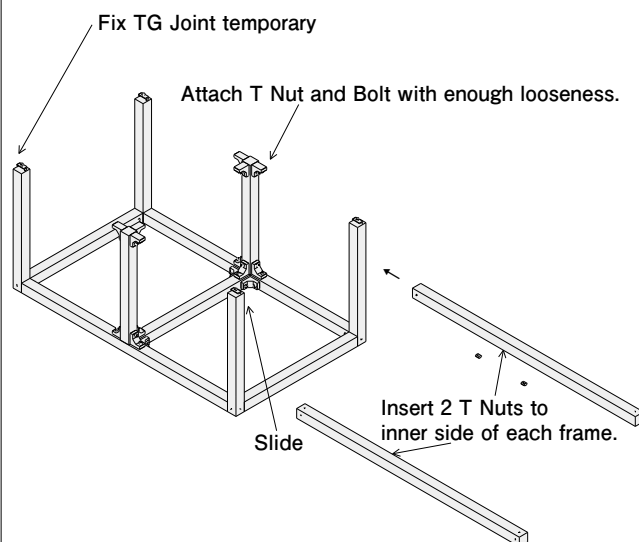
* Don't forget to prepare T Nut and Free Nut to install Top Plate and Cover.

3. Scratch marking-off on Frame 4. Confirm the quantity of Nuts to insert before assembly.

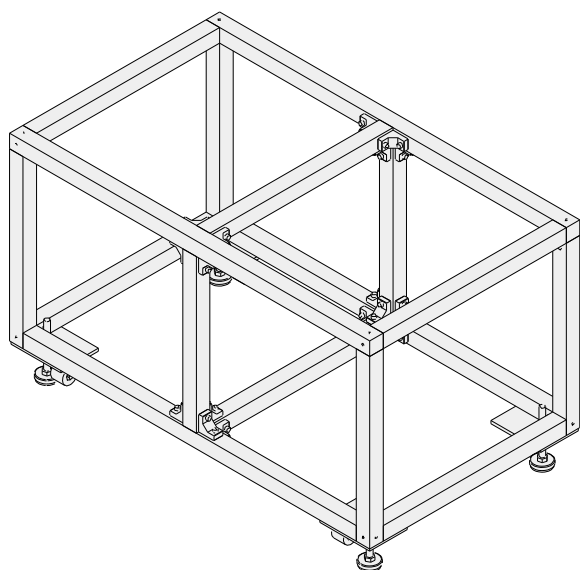
3 Put up intermediate poles



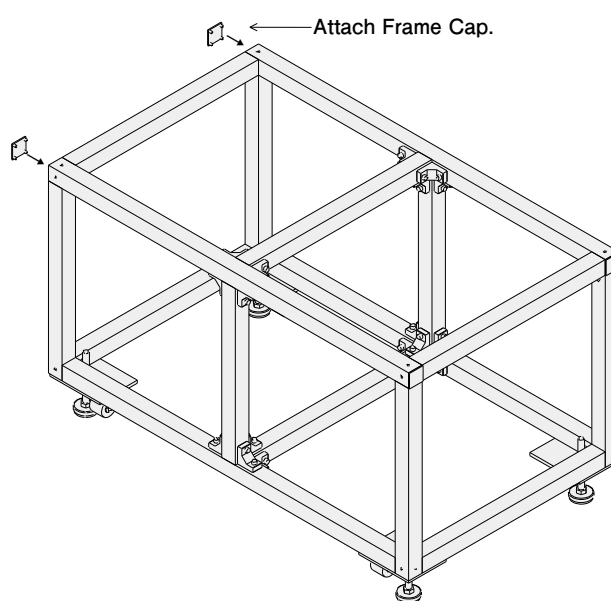
4 Assemble top surface (1)



7 Tighten finally with adjusting the Frame's position.



8 Completion



* Please clean the surface with alcohol, etc after assembly.

SF20

SS Size

SF30

S Size

SF40

L Size

Complex Parts

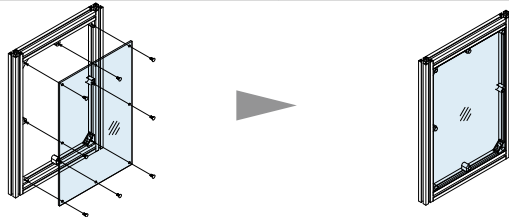
Door Panel
Clean Equipment

Technical Data

Technical Data *How to install*

How to install Panel

How to fix by Bracket's Tap



(How to install)

- Fasten Resin Panel to the tap of D Bracket or Hard Bracket by bis.

(Selection Indication)

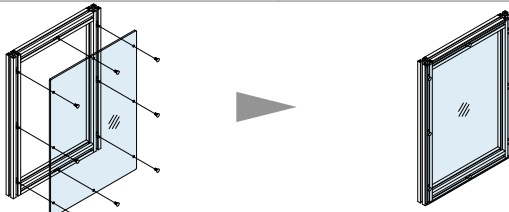
- Panel installation is easy even after assembling frame, and the Panel's surface becomes as same as Frame's surface.

(For details)

Bracket with Tap

SF-20 series	P32~
SF-30 series	P63~
SF-40・45 series	P101~

How to fix from outer Frame



(How to install)

- Insert After Nut in frame's groove, and fasten Resin Panel by bis.

(Selection Indication)

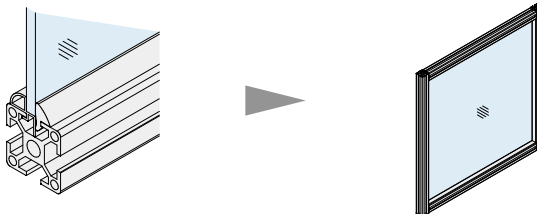
- High-airtightness component with lessen the gap with frame.

(For details)

After Nut to fix Resin Panel.

After Nut SS	P23~
After Nut S	P61~
After Nut L	P99~

How to fix by Panel Fix



(How to install)

- Fix Resin Panel in to the frame's groove, using Panel Fix.

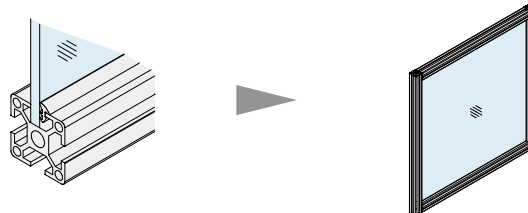
(Selection Indication)

- Beautiful appearance without bis. Displacing is possible after assembly.

(For details)

Panel Fix	P172
Panel Fix Rubber	

How to fix by Panel Clamp



(How to install)

- Fit Resin Panel into the frame's groove before assembling the frame, and fix by Panel Clamp completely.

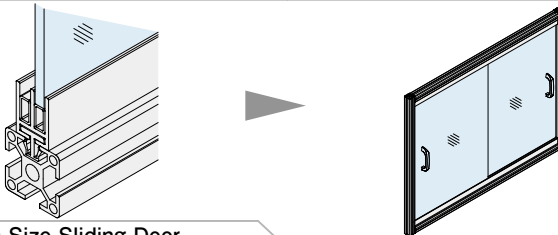
(Selection Indication)

- Appearance is clear.
- Frame assembly and inserting Panel is done at the same time, so it's suitable for unit in face.

(For details)

Panel Clamp	P172
-------------	------

Resin Panel Sliding Door



(How to install)

- Resin Panels become a Sliding Door, using Slide Rail and Slide Spacer.

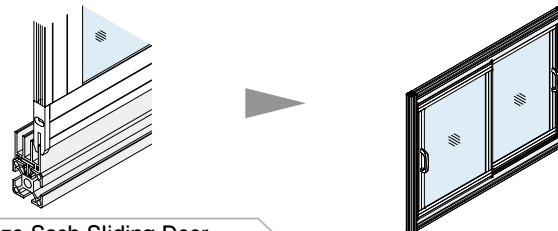
(Selection Indication)

- Sliding Door Structure at low cost.

(For details)

Slide Rail	
Slot Connector	P176
Slide Spacer	

Medium Size Sliding Door



(How to install)

- Sliding Door's rim frame is used as a Sliding Door with installing rollers to the convex part of the slide rail.

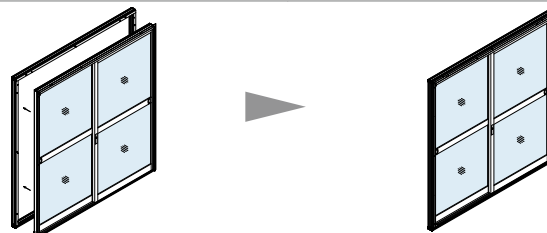
(Selection Indication)

- Suitable for medium size.

(For details)

Slide Rail	
Slot Connector	P176
Frame for Sliding Door's Rim	
Panel Joint Kit	P178
Rail Guide	
Sliding Door Wheel	
Panel Guard	P130

Large size Sash Sliding Door



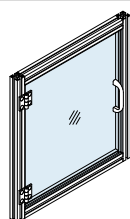
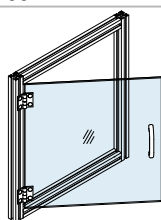
(How to install)

- Fasten Aluminum Sash Kit to Aluminum Frame by bis to install.

(Selection Indication)

- Suitable for large size.

Resin Door



(How to install)

- Attach hinges to Resin Panel and use as a door.

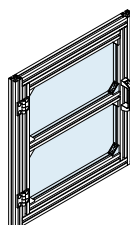
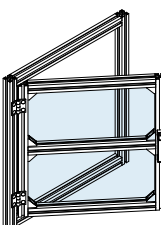
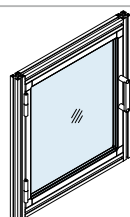
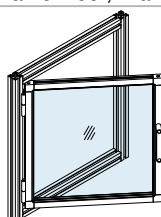
(Selection Indication)

- Door structure at low cost.

(For details)

Installation size	P175
Fixed Hinges	P140~

Panel Frame Door, Frame Door



(How to install)

- Make a rim by various kinds of Frame to use as a door.

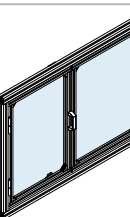
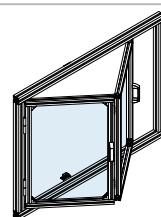
(Selection Indication)

- Medium to large size door structure.

(For details)

Installation size	P75
Panel Frame	P174
TC Block	P140~
Fixed Hinges	P140~

Folding Door



(How to install)

- Make a rim by Frames, and attach Folding Door Slider to slide the frame's groove.

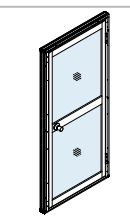
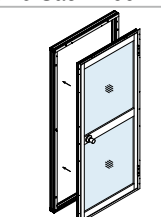
(Selection Indication)

- You can use the covering's outer space effectively when opening and closing.

(For details)

Folding Door Slider	P179
---------------------	------

Large Size Sash Door



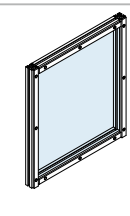
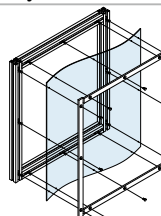
(How to install)

- Fasten Aluminum Sash Kit to Aluminum Frame.

(Selection Indication)

- To construct large size door. Handles are standard adoption.

Fixing Vinyl Sheet



(How to install)

- Fix Vinyl Sheet to Aluminum Frame's groove by Sheet Fixing Plate or drilled Flat Bar.

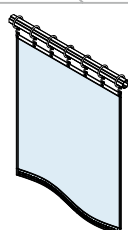
(Selection Indication)

- Covering structure at lower cost than Hard Resin Panel.

(For details)

Vinyl Sheet	P182
Flat Bar	P128

Vinyl Sheet Curtain



(How to install)

- Vinyl Sheet becomes a curtain using Green Frame and Ring Runner.

(Selection Indication)

- Door structure at lower cost than Hard Resin Panel.

(For details)

Vinyl Sheet	P182
-------------	------

SF20

SS Size

SF30

S Size

SF40-45

L Size

Complex Parts

Door・Panel
Clean Equipment

Technical Data

Technical Data Q & A

Q What is the indication of selecting aluminum frame?

A

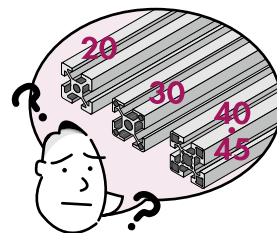
SF series is composed of 3 series as follows.

SF20 series (groove width 6mm). For small size covering, rack for small parts, etc.

SF30 series (groove width 8mm). For medium size covering, conveyer frame, etc.

SF40·45 series (groove width 10mm). For large size clean booth, equipment table, component material, etc.

Please solve the mass of the products at first, and select the frame referring Indication of allowable load (P194).



Q What is the indication of selecting bracket?

A

Usable bracket is written separately by each series. Please refer Indication of bracket's allowable load (P195).

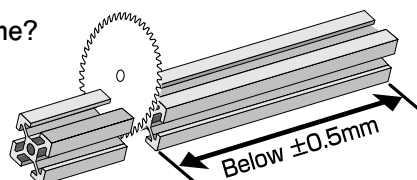
· In case that L-shaped bracket interferes product or panel, please select QC Joint, TG Joint, KF Joint, S Double Joint, Tapping Bolt, S Blind Bracket or Plate Bracket.

· In case that aluminum frame overhangs to cantilever, please use Truss Joint, Turn Bracket or Hard bracket DE135/45 and construct large size stay.

Q How much is the cutting tolerance of aluminum frame?

A

±0.5mm less than specified size.



Q How is aluminum frame finished?

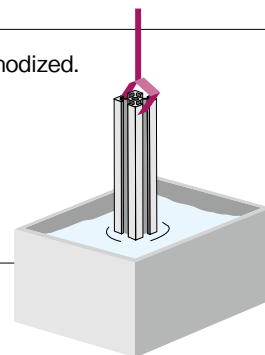
A

A. In SF series, frame's surface is anodized to finish (more than 9μm). Cut surface is not anodized.

* Black anodizing is also available. Black anodizing cost will be added to our price list.

* Please refer the standard black anodized Frame and Bracket in the series page.

* Frame without anodizing for conduction measure can also be ordered specially.



Q How is aluminum frame cut?

A

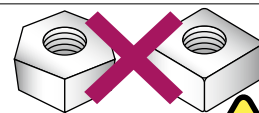
It's cut by tip saw for mild steel. Please cover the cut surface by Frame Cap after assembling frame.

Q Can JIS standard hexagonal nut and square nut be used for SF series?

A

No. The area of pressure by sitting is cordoned by using the exclusive nut, and SUS is manufacturing the nut to prevent aluminum material from buckling.

* Exclude SF Light series.



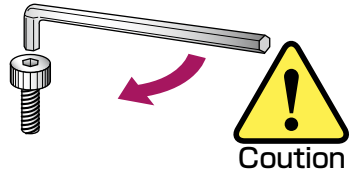
Coution

Q Does Nut fall down when frame is stood vertically?

A

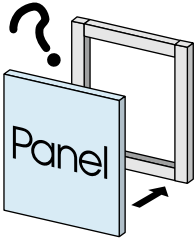
Please attach "Anti-Skid Cap" to T Nut and insert to the frame's groove. Or in case of inserting later, please use "Easy Nut", "After Nut Support" and "Lock Nut". "Anti-Skid Cap" and "After Nut Support" is provided as 50pieces/pack.

Q What is appropriate tightening force in using Nut or Hexagon Socket Bolt?

Size of screw	Appropriate tightening force	(Appropriate tightening torque-reference)	
M3	3.2KN	(1.9N·m)	
M4	5.1KN	(4.1N·m)	
M5	7.4KN	(7.4N·m)	
M6	9.0KN	(10.8N·m)	
M8	15.5KN	(24.9N·m)	

Aluminum may buckle or Nut may break if you tighten harder than the appropriate tightening force. We recommend using T Nut to the tightening part which intensity applies.

Q How can we fix Resin Panel to Aluminum Frame?

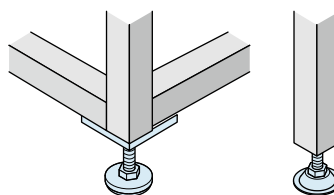
		Please select fixing method according to your purpose.
In case you stick Panel to outer frame	...	Please insert T Nut (with Anti-Skid Cap) to frame's groove at first, and fix by Truss Screw.
In case you fasten Panel to inner frame by bis	...	Fixing method is in P47, 82 and 125. With this method, the appearance is good and removing Panel is easy, so it's suitable for Safety Cover, etc.
In case you fit into inner frame.	...	Fixing method is in P214 and 215. With this method, drill-processing or fastening with bis aren't necessary, so it's suitable for the purpose of emphasizing design.

Q How can we install doors to Aluminum Frame?

Please select the installing method according to your purpose.	
Resin Panel Door	...Please refer Resin Panel (P182) and Hinge·Pull, etc (P140 ~).
Frame Rim Door	...Please select Panel Frame (P174) or SF20 series (P24 ~) and create the door.
* Please construct frame rim with SF30 series for large size door.	

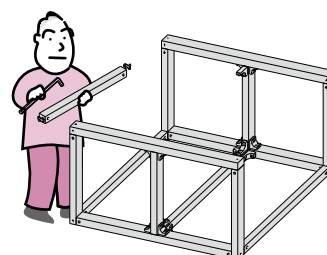
Q How can we fix Adjuster or Caster?

Usable adjuster and caster are provided by each frame size.	
SF20 series	(P43,44)
SF30 series	(P77,78)
SF40·45 series	(P119)



Q What are the precautions for assembly?

- Please assemble frames in wide space on flat floor.
- Regarding squaring and surface matching in assembling frame, it's convenient to fit Chamfering Jig from outside.
- Purchasing Lock Nut at the beginning is recommended as reserve parts.
- Please check whether you forgot to tighten all bolts or not after assembly.
- SUS also responds Unit Assembly Service.



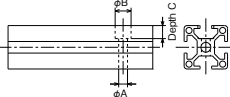
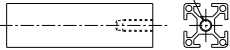
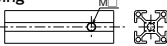
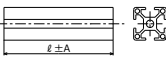
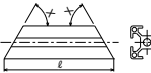
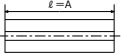
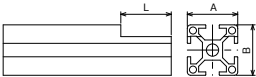
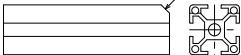
Technical Data Frame Processing

Frame Processing List

Please specify by processing No. (P208~219) or in the drawing when you want the frame processing below.

Item No. Length(mm) Processing No.
 **SF2-30-30** $\ell=800$ **TGS**

Specify by drawing in case of no Processing No.

Processing Name	Processing Contents	Note	Category																				
Drilling 	In case A=8/11.1/13.1/15.1	Please refer the processing number list in P214~219 for drilling TG Joint, S Double Joint, Tapping Bolt and KF Joint.	SFZ-002																				
	In case A<20 and other than above		SFZ-003																				
	In case A≥20		SFZ-009																				
Counterbore 	<table><tr><td></td><td>A</td><td>B</td><td>C</td></tr><tr><td>SF30 series (for M6 Hexagon Socket Bolt)</td><td>6.6</td><td>11</td><td>9</td></tr><tr><td>SF40 (45) series (for M8 Hexagon Socket Bolt)</td><td>9</td><td>14</td><td>12.5 (13)</td></tr><tr><td>SF20 series (for M5 Hexagon Socket Bolt)</td><td>5.5</td><td>9.5</td><td>6</td></tr><tr><td>(for M12 Hexagon Socket Bolt)</td><td>14</td><td>20</td><td>specify</td></tr></table>		A	B	C	SF30 series (for M6 Hexagon Socket Bolt)	6.6	11	9	SF40 (45) series (for M8 Hexagon Socket Bolt)	9	14	12.5 (13)	SF20 series (for M5 Hexagon Socket Bolt)	5.5	9.5	6	(for M12 Hexagon Socket Bolt)	14	20	specify	Specify by drawing. (Refer P196)	SFZ-004
		A	B	C																			
	SF30 series (for M6 Hexagon Socket Bolt)	6.6	11	9																			
SF40 (45) series (for M8 Hexagon Socket Bolt)	9	14	12.5 (13)																				
SF20 series (for M5 Hexagon Socket Bolt)	5.5	9.5	6																				
(for M12 Hexagon Socket Bolt)	14	20	specify																				
Spot Facing other than above		SFZ-009																					
M5 Depth15		SFZ-005																					
End Face Tapping 	• M8 Depth 24※ • M12 Depth 36※	Refer P209~211 Drilled to the depth of 50 Specify by drawing.	SFZ-008																				
	M12 Helisert 1.5D		SFZ-006																				
	M14 Depth 42		SFZ-007																				
Side Tapping 	Taping on Frame Side	Specify by drawing.	SFZ-009																				
QC Joint Processing 	Drilling for QC Joint	Refer P212~213	SFZ-002																				
High Accuracy Cut (HC) 	A=0.5	Standard Cutting Size Tolerance																					
	A=0.2~0.4 (ℓ≤1000mm)	Specify by drawing.	SFZ-015																				
Slant Cut 	X=45°	Specify by Processing No. below. Specify by drawing for others.	SFZ-016																				
	45°<X<90° (0.5° Unit)	Specify by drawing.	SFZ-013																				
	X<45°		SFZ-014																				
Cost to cut nonstandard size 	Cut the dimension of 30mm≤A≤50mm	It's adapted when receiving the specification to cut more than 30mm and below 50mm.	SFZ-009																				
Notching 	A×B≥900mm [㎡]	L≤100mm	Specify by drawing.	SFZ-009																			
		100mm<L≤200mm																					
	900mm [㎡] <A×B	L≤100mm																					
	≤2700mm [㎡]	100mm<L≤200mm																					
	2700mm [㎡] <A×B	L≤100mm																					
	100mm<L≤200mm																						
C-Chamfering 	C Below 0.5	Specify by drawing.	SFZ-009																				
	C 0.6~C 5																						
	C 5.1~C 10																						
	C 10.1 and up																						

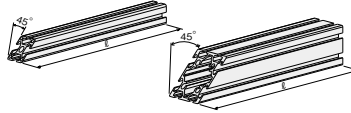
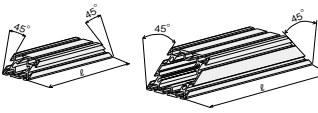
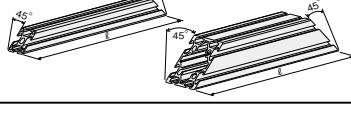
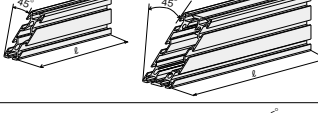
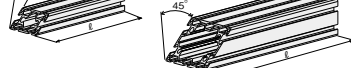
45° Slant Cut Frame Processing Number List

Please specify Processing No. below to the Frame when using Hard Bracket DE135/45 in P41·74·109

Item No. Length(mm) Processing No.
 **SF2-30-60** $\ell=800$ **DHS**

※ Specify by drawing in case of no Processing No.

※ Specify in drawing other than intended Frames.

Processing No.	45° Slant Cut Shape	Intended Frame	Processing No.	45° Slant Cut Shape	Intended Frame
DSS		SF-20-20 (or Black) SF-25-25 (or Black) SF-40-40-2S (or Black) SF-30-30 (or Black) SF-K-30-30 SF-35-35 SF-50-50-2S SF-60-60-2S (or Black) SF-40-40 (or Black) SF-80-80 (or Black/H) SF-K-40-40 SF-K-45-45 SF-90-90 (or Black/H) SF-60-60-1S SF-80-80-1S	DHW		SF-30-60-2H SF-K-30-60 SF-30-90 SF-30-120 SF-60-90 SF-50-100-2S SF-60-120 SF-40-80 (or Black) SF-40-160 SF-45-90 (or Black) SF-K-40-80 SF-K-45-90 SF-80-160 SF-90-180 SF-45-180 Panel Guard T3 (SFF-K34) ※ Panel Guard T5 (SFF-K54) ※ SF-35-70 ※
DSW		SF-20-40 (or Black) SF-20-60 SF-20-80 SF-40-60 SF-40-80-SS SF-30-60 (or Black)	DVS		※ Only DVS-DVW
DHS			DVW		

Tapping on Frame's Cut Surface

- * You can order in your drawing, too.
- * Please inquire regarding the nonstandard depth.
- * Only when YG Joint, S Double Joint and KF Joint will be drilled together with tapping, please specify L or R.

SF20 Series

SF-20•20 (1F•2F•3F•Black•2H Included)

Item No.

SF-20•20

Length(mm)

ℓ=800

Tapping

TL or TR (In case of both sides TW)

SF-20•60

SF-20•80

SF-20•40•40

SF-20•20•R

SF-25•25 (Black Included)

SF-20•40 (1F•Black Included)

Item No.

SF-20•40

Length(mm)

ℓ=800

Tapping

TL or TR (In case of both sides TW)

SF-40•40•2S (1F•2F•Black Included)

SF-40•80•SS

SF-40•60•SS

SF-20•DE45 (DE30•DE60 Included)

SF30 Series

SF2-30•60 (1F•2H Included)		
SF-K•30•60		
SF-30•120		
SF-60•90		
SF2-30•30 (1F•2F•3F•2H Included)		
SF-K•30•30		
SF-30•90		
SF-60•60•2S (1F•2F•Black Included)		

SF20

SS Size

SF30

S Size

SF40

L Size

Complex Parts

Door・Panel
Clean Equipment

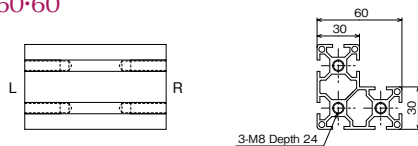
Technical Data

Technical Data *Frame Processing*

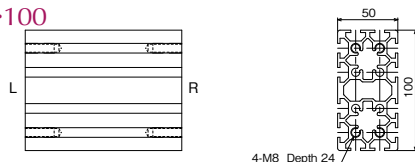
Tapping on Frame's Cut Surface

SF30 Series

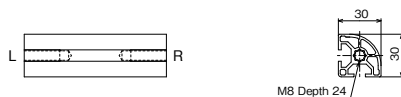
SF-30•60•60



SF-50•100



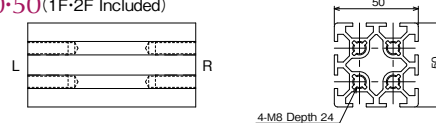
SF-30•30•R



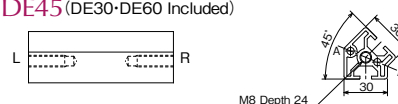
SF-60•120



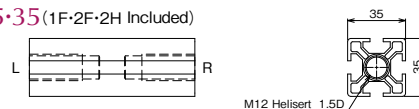
SF-50•50(1F•2F Included)



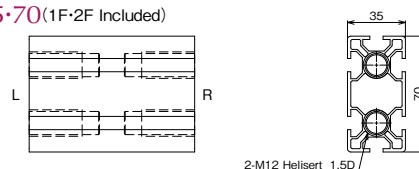
SF-30•DE45 (DE30•DE60 Included)



SF-35•35(1F•2F•2H Included)

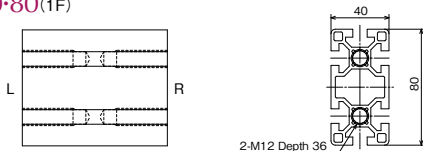


SF-35•70(1F•2F Included)

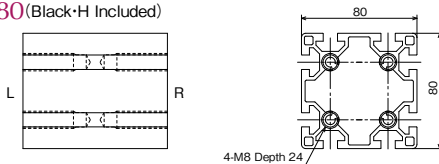


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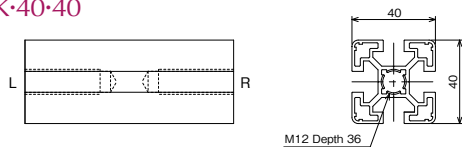
SF2-40•80(1F)



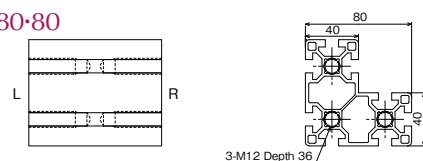
SF-80•80(Black•H Included)



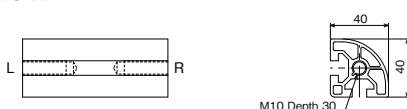
SF-K•40•40



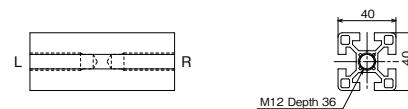
SF-40•80•80



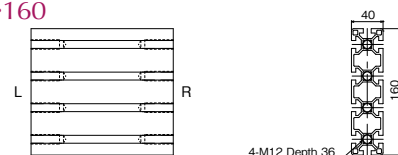
SF-40•40•R



SF2-40•40(1F•2F•3F•2H Included)



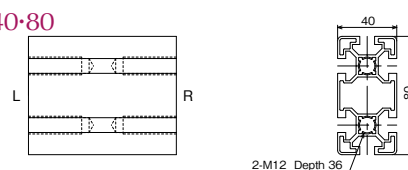
SF-40•160



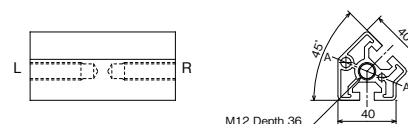
SF-80•160



SF-K•40•80

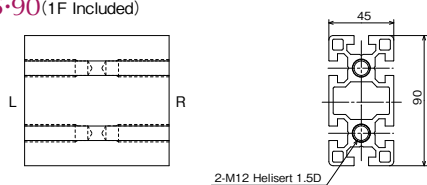


SF-40•DE45 (DE30•DE60 Included)

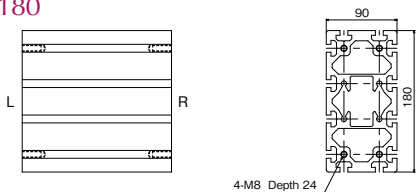


SF45 Series

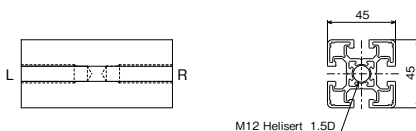
SF2-45-90 (1F Included)



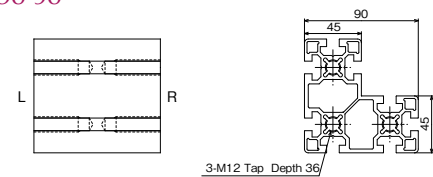
SF-90-180



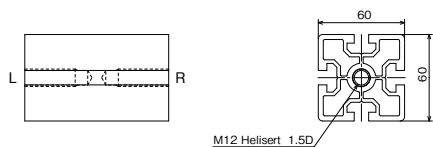
SF-K-45-45 (1F-2F Included)



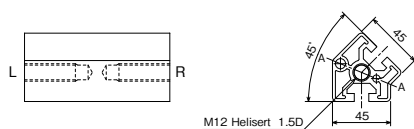
SF-45-90-90



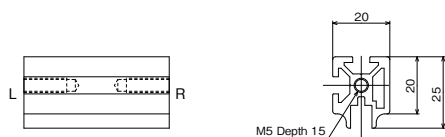
SF-60-60-1S



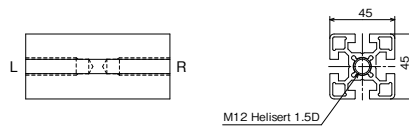
SF-45-DE45 (DE30-DE60 Included)



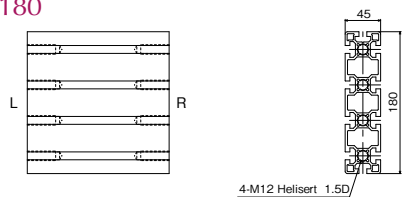
Panel Frame



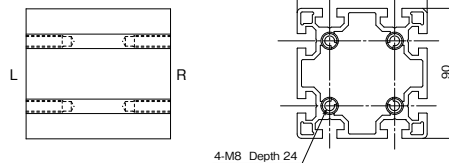
SF2-45-45 (1F-2F-3F-2H Included)



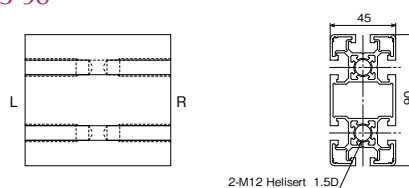
SF-45-180



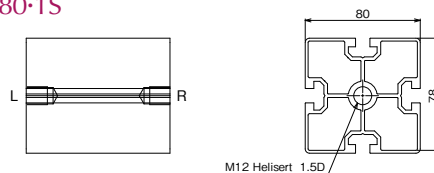
SF-90-90 (H Included)



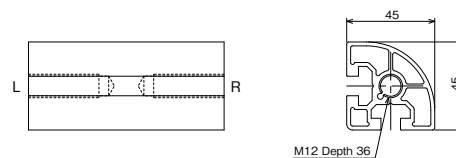
SF-K-45-90



SF-80-80-1S



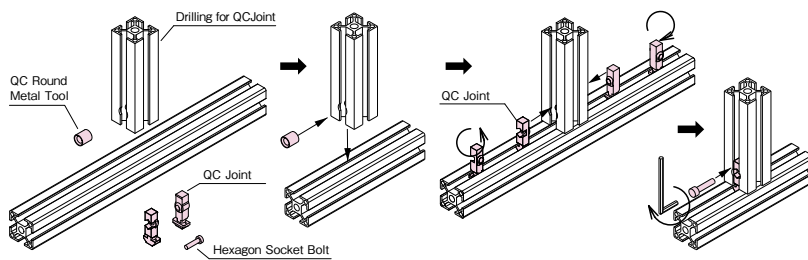
SF-45-45-R



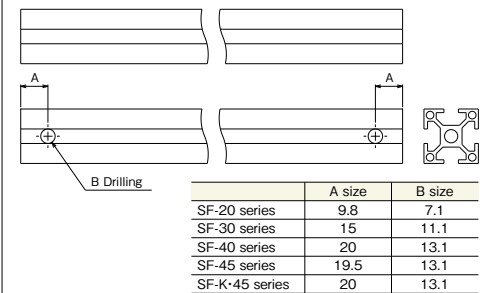
Technical Data Drilling Symbol for QC Joint

Drilling Symbol for QC Joint

< QC Joint Assembly Contents >



<Position and size of the hole to insert round metal for QC Joint>

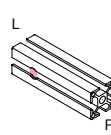
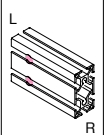
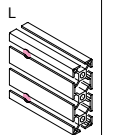
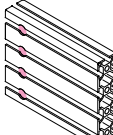
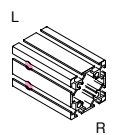
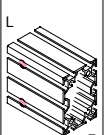
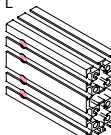
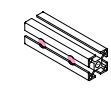
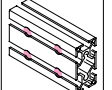
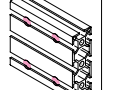
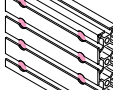
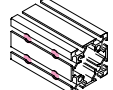
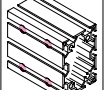
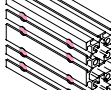
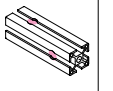
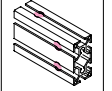
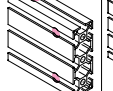
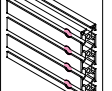
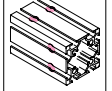
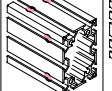
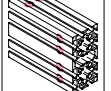
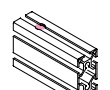
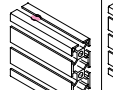
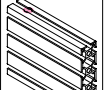
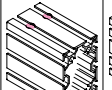
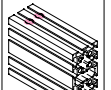
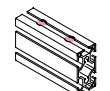
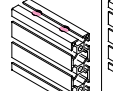
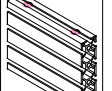
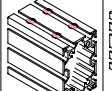
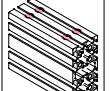


◆QC Joint..... Insert QC Joint to frame's groove (last-in is possible), and fit another frame with QC round metal installed to combine by tightening bolt. It's easily squared and hardly makes gap because 2 frames pull each other. Appearance is clear without outer joint part's overhang. Also, assembly process is shortened because there's no need to set Nuts to frame before.

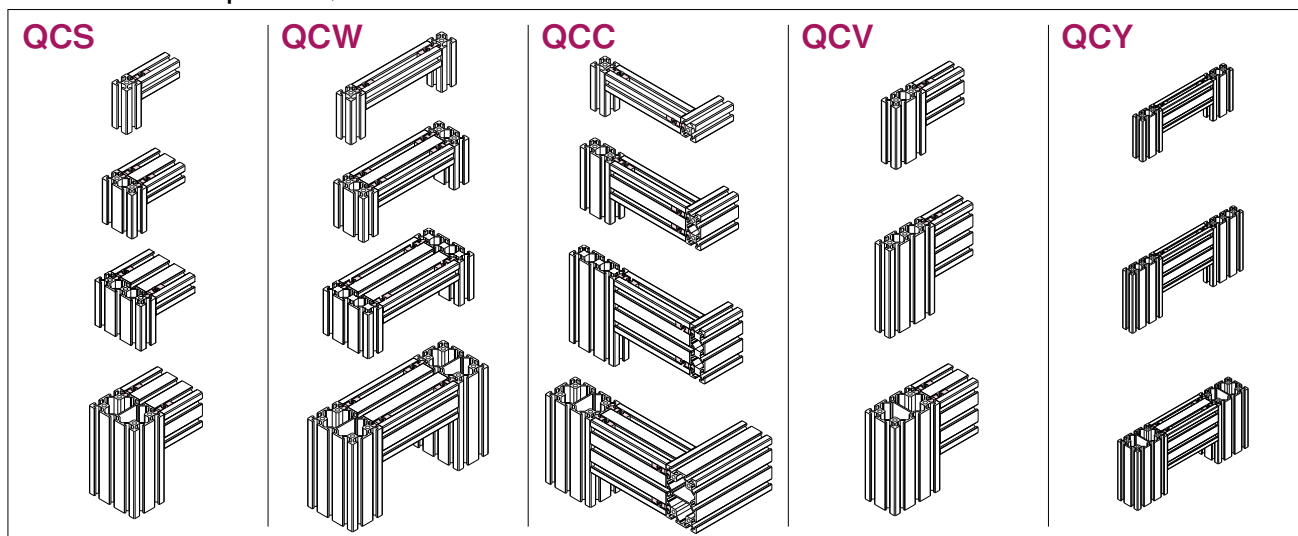
- Please specify by QC Joint processing number when you use each QC Joint in P37,69,113.
- Please mind the direction because QC Joint cannot be inserted to the surface without groove.

Item No. Length(mm) Processing No.
 **SFF-324** **ℓ=800** **QCS**

QC Joint Processing List

Groove Type		1 Row × 1 Row		1 Row × 2 Rows		1 Row × 3 Rows		1 Row × 4 Rows		2 Rows × 2 Rows		2 Rows × 3 Rows		2 Rows × 4 Rows	
Processing No.	Frame Name	SF-20-20 SF2-30-30 SF-K-30-30 SF2-40-40 SF-K-40-40 SF2-45-45 SF-K-45-45 SF-60-60-1S SF-80-80-1S	SF-20-20-1F SF-20-20-2H SF2-30-30-1F SF2-30-30-2H SF2-40-40-1F SF2-40-40-2H SF2-45-45-1F SF2-45-45-2H SF-K-45-45-1F	SF-20-40 SF2-30-60 SF-K-30-60 SF2-40-80 SF-K-40-80 SF2-45-90 SF-K-45-90	SF-20-40-1F SF2-30-60-1F SF2-30-60-2H SF2-40-80-1F SF2-45-90-1F	SF-20-60 SF-30-90	SF-30-120	SF-20-80 SF-40-160 SF-45-180	SF-40-40-2S SF-50-50-2S SF-60-60-2S SF-80-80 SF-80-80-H SF-90-90 SF-90-90-H	SF-40-40-2S-1F SF-50-50-2S-1F SF-60-60-2S-1F	SF-40-60-SS SF-60-90	SF-60-120 SF-50-100-2S	SF-40-80-2S SF-80-160 SF-90-180		
	QCS														
	QCW														
	QCC														
	QCV														
QCY															

Reference Example of QC Joint

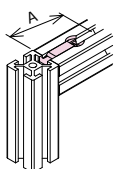


QC Joint Kit Table

Groove Type	Frame Name	QCS	QCW	QCC	QCV	QCY			
1 Row × 1 Row	SF-20-20	SS Kit×1	SS Kit×2	SS Kit×2					
	SF-20-20-1F								
	SF-20-20-2H								
	SF2-30-30	S Kit×1	S Kit×2	S Kit×2					
	SF-K-30-30								
	SF2-30-30-1F								
	SF2-30-30-2H	L40 Kit×1	L40 Kit×2	L40 Kit×2					
	SF2-40-40								
	SF-K-40-40								
	SF2-40-40-1F	L45 Kit×1	L45 Kit×2	L45 Kit×2					
SF2-40-40-2H									
SF2-45-45									
SF-K-45-45									
SF2-45-45-1F									
SF2-45-45-2H									
SF-K-45-45-1F									
SF-60-60-1S				L60 Kit×1	L60 Kit×2	L60 Kit×2			
SF-80-80-1S				L80 Kit×1	L80 Kit×2	L80 Kit×2			
1 Row × 2 Rows	SF-20-40	SS Kit×2	SS Kit×4	SS Kit×2/ SS40 Kit×1	SS40 Kit×1	SS40 Kit×2			
	SF-20-40-1F								
	SF2-30-60	S Kit×2	S Kit×4	S Kit×2/ S60 Kit×1	S60 Kit×1	S60 Kit×2			
	SF-K-30-60								
	SF2-30-60-1F								
	SF-30-60-2H								
	SF2-40-80	L40 Kit×2	L40 Kit×4	L40 Kit×2/ L80 Kit×1	L80 Kit×1	L80 Kit×2			
	SF-K-40-80								
	SF2-40-80-1F								
	SF2-45-90	L45 Kit×2	L45 Kit×4	L45 Kit×2/ L90 Kit×1	L90 Kit×1	L90 Kit×2			
SF-K-45-90									
SF2-45-90-1F									
1 Row × 3 Rows	SF-20-60	SS Kit×2	SS Kit×4	SS Kit×2/ SS60 Kit×1	SS60 Kit×1	SS60 Kit×2			
1 Row × 4 Rows	SF-30-90	S Kit×2	S Kit×4	S Kit×2/ S90 Kit×1	S90 Kit×1	S90 Kit×2			
	SF-20-80	SS Kit×4	SS Kit×8						
	SF-30-120	S Kit×4	S Kit×8	S Kit×4/ S120 Kit×1	S120 Kit×1	S120 Kit×2			
	SF-40-160	L40 Kit×4	L40 Kit×8						
	SF-45-180	L45 Kit×4	L45 Kit×8						
2 Rows × 2 Rows	SF-40-40-2S	SS40 Kit×2	SS40 Kit×4	SS40 Kit×4					
	SF-40-40-2S-1F								
	SF-50-50-2S								
	SF-50-50-2S-1F	S50 Kit×2	S50 Kit×4	S50 Kit×4					
	SF-60-60-2S	S60 Kit×2	S60 Kit×4	S60 Kit×4					
	SF-60-60-2S-1F								
	SF-80-80								
	SF-80-80(H)	L80 Kit×2	L80 Kit×4	L80 Kit×4					
	SF-90-90(H)	L90 Kit×2	L90 Kit×4	L90 Kit×4					
2 Rows × 3 Rows	SF-40-60-SS	SS40 Kit×2	SS40 Kit×4	SS40 Kit×2/ SS60 Kit×2	SS60 Kit×2	SS60 Kit×4			
2 Rows × 4 Rows	SF-60-90	S60 Kit×2	S60 Kit×4	S60 Kit×2/ S90 Kit×2	S90 Kit×2	S90 Kit×4			
	SF-40-80-2S	SS40 Kit×4	SS40 Kit×8						
	SF-50-100-2S	S50 Kit×4	S50 Kit×8	S50 Kit×4/ S100 Kit×2	S100 Kit×2	S100 Kit×4			
	SF-60-120	S60 Kit×4	S60 Kit×8	S60 Kit×4/ S120 Kit×2	S120 Kit×2	S120 Kit×4			
	SF-80-160	L80 Kit×4	L80 Kit×8						
	SF-90-180	L90 Kit×4	L90 Kit×8						

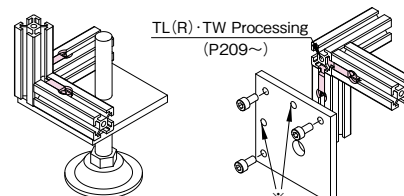
Precautions for using QC Joint

* There is a part which cannot use on frame's groove after QC Joint processing.



Series	A Size (mm)
SF20 Series	19.5
SF30 Series	27
SF40-45 Series	35

* In case of using plate like Level Adjuster Kit, etc together

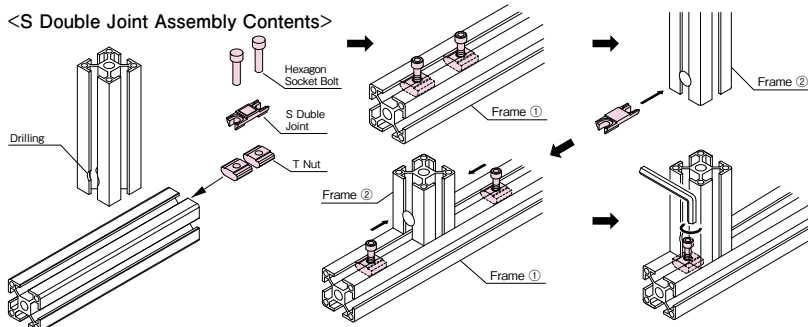


Please do the Tapping on vertical frame, and fix the plate at 3 points, because QC Joint and the holes with * mark overlap.

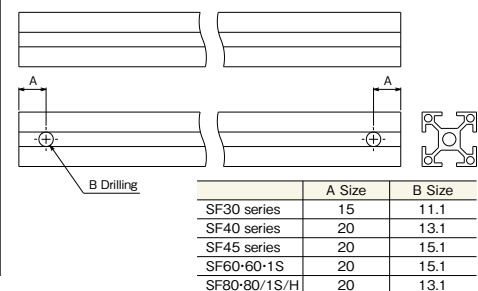
Technical Data Drilling Symbol for S Double Joint

Drilling Symbol for S Double Joint

<S Double Joint Assembly Contents>



<Position and Size of the Hole to insert Round Metal for S Double Joint>



◆S Double Joint…… Drill a hole to insert S Double Joint metal on frame ② and insert nuts to frame ①, then fix from the both sides of metal for joint by bolt. It's easily squared and hardly makes gap because 2 frames pull each other. Appearance is clear without outer joint part's overhang.

Please specify S Double Joint Drilling No, below to the Frame when using S Double Joints in P70-114.

Item No. Length(mm) Processing No.
SFF-324 **ℓ=800** **WJS**

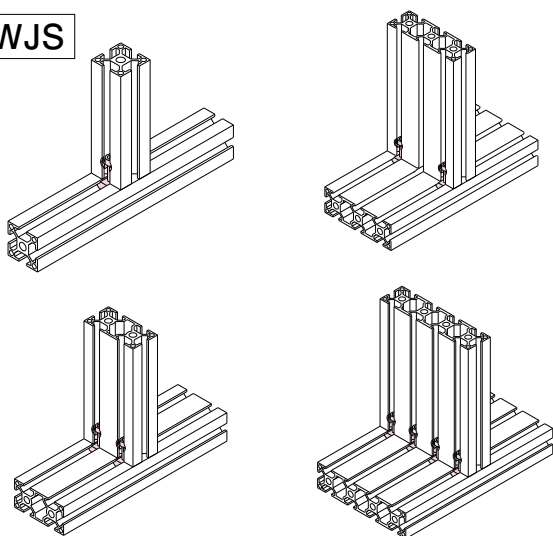
S Double Joint Processing List

Groove Type		1 Row × 1 Row Type (Include 1F·2H Types)	1 Row × 2 Rows Type	1 Row × 3 Rows Type	1 Row × 4 Rows Type	2 Rows × 2 Rows Type
SF30 Series	S Double Joint Kit 30	SF2-30-30 SF2-30-30-1F SF2-30-30-2H SF-K-30-30	SF2-30-60 SF-K-30-60	SF-30-90	SF-30-120	
SF40 Series	S Double Joint Kit 40	SF2-40-40 SF-K-40-40 SF2-40-40-1F SF2-40-40-2H	SF2-40-80 SF-K-40-80		SF-40-160	
SF45 Series	S Double Joint Kit 45	SF2-45-45 SF-K-45-45 SF2-45-45-1F SF-K-45-45-1F SF2-45-45-2H	SF2-45-90 SF-K-45-90		SF-45-180	
	S Double Joint Kit 60	SF-60-60-1S				
	S Double Joint Kit 80	SF-80-80-1S				SF-80-80(H)

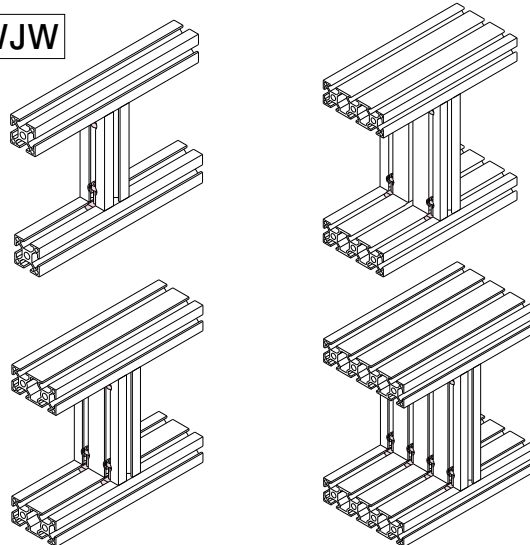
WJS					
Exclude 1F·2H Types					

Reference Example of S Double Joint

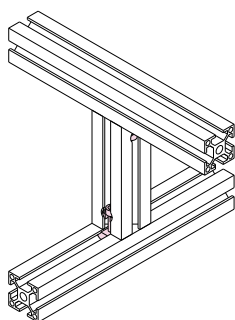
WJS



WJW



WJC



SF20

SS Size

SF30

S Size

SF40-55

L Size

Complex Parts

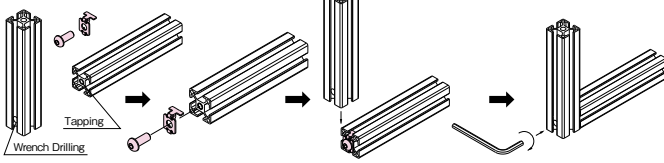
Door - Panel
Clean Equipment

Technical Data

Technical Data Drilling Symbol for TG Joint and Tapping Bolt

Drilling Symbol for TG Joint and Tapping Bolt

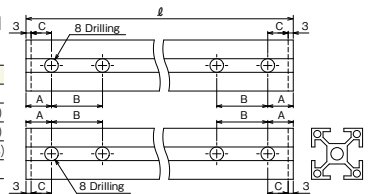
<TG Assembly Contents>



<Position and Size of the Hole to insert Round Metal for TG Joint and Tapping Bolt>

	A Size	B Size	C Size
*1 SF20 Series	10	20	A-3(7)
SF30 Series	15	30	A-3(12)
SF40 Series	20	40	A-3(17)
*2 SF45 Series	22.5	45	A-3(19.5)
*2 SF60-60-1S	30	—	—

*1 Only Tapping Bolt *2 Only TG Joint
Drilling for SF20 : 6 Drilling



- ◆TG Joint..... After Tap processing on the end face of one frame, fix metal for TG Joint temporary to tighten from wrench hole of another frame to combine. It's easily squared and hardly makes gap because 2 frames pull each other. Appearance is clear without outer joint part's overhang.
- ◆Tapping Bolt... Joint as same as TG is possible without tap-processing or metals for TG Joint.

Please specify TG processing number below for frame to be drilled wrench hole, when you use any TG Joint or Tapping Bolt.

Item No. Length(mm) ProcessingNo.
SFF-324 **ℓ=800** **TGS**

◆<Optional Specification for Frame Cap> Within Outer Size

If you want to make Frame Cap within outer size, please use options.

Item No. Length(mm) Processing No.
SFF-324 **ℓ=800** **TGS**

3 (A Size-3:Both end surfaces)
 3R (A Size-3:Only right side)
 3L (A Size-3:Only left side)

TG Joint · Tapping Bolt Processing List *1 Only Tapping Bolt *2 Only TG Joint

Groove Type 1Row×1Row ◆Object Frame... **SF-20-20** **SF2-30-30/SF-K-30-30** **SF2-40-40/SF-K-40-40** **SF2-45-45** **SF-60-60-1S**

TGS **TGSW** **TGW** **TGWW** **TGC** **TGCW**

TGU **TGUW** **TGD** **TGDW** **TGM** **TGMW**

Groove Type 1Row×1Row<1 Flat Surface> ◆Object Frame... **SF-20-20-1F** **SF2-30-30-1F** **SF2-40-40-1F/SF-K-40-40-1F** **SF2-45-45-1F**

TGS **TGSW** **TGW** **TGWW** **TGC** **TGCW**

TGU **TGUW** **TGD** **TGDW** **TGM** **TGMW**

TGA **TGAW** **TGB** **TGBW** **TGE** **TGEW**

Groove Type 1Row×1Row<2 Flat Surfaces> ◆Object Frame... **SF-20-20-2F** **SF2-30-30-2F** **SF2-40-40-2F/SF-K-40-40-2F** **SF2-45-45-2F**

TGS **TGSW** **TGW** **TGWW** **TGC** **TGCW**

TGU **TGUW** **TGD** **TGDW** **TGM** **TGMW**

TGA **TGAW** **TGE** **TGEW** **TGF** **TGFW**

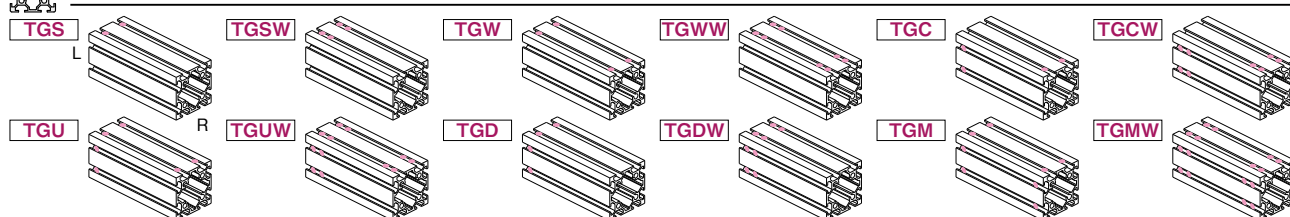
Groove Type 1Row×1Row<3 Flat Surfaces> ◆Object Frame... **SF-20-20-3F** **SF2-30-30-3F** **SF2-40-40-3F** **SF2-45-45-3F**

TGS **TGSW** **TGW** **TGWW**

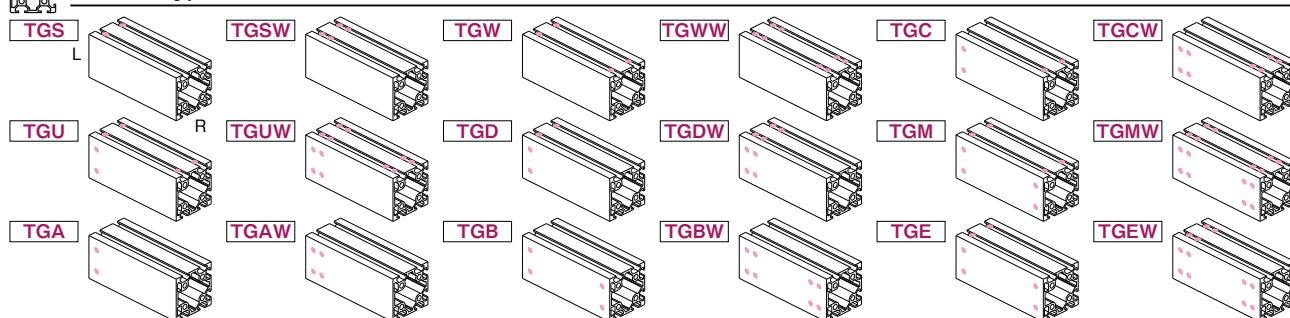
Groove Type 1Row×1Row<2H> ◆Object Frame... **SF-20-20-2H** **SF2-30-30-2H** **SF2-40-40-2H** **SF2-45-45-2H**

TGS **TGSW** **TGW** **TGWW**

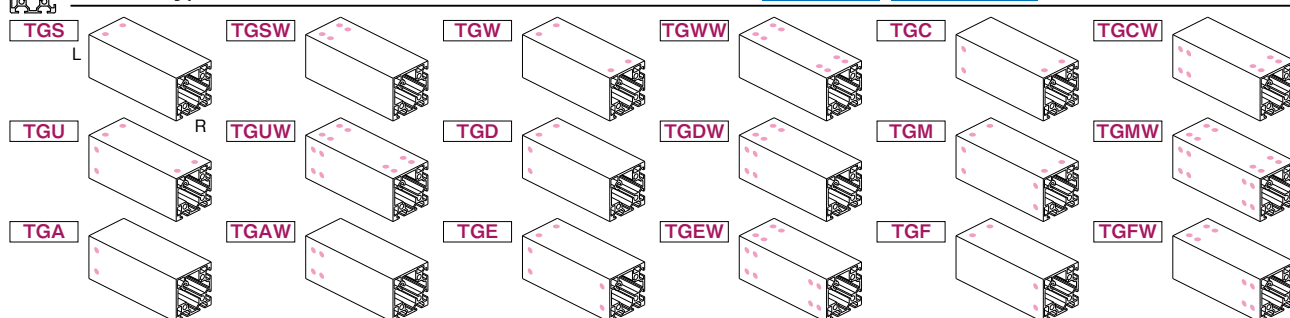
 Groove Type 2Rowsx2Rows ◆Object Frame... ^{※1} SF-40-40-2S SF-60-60-2S



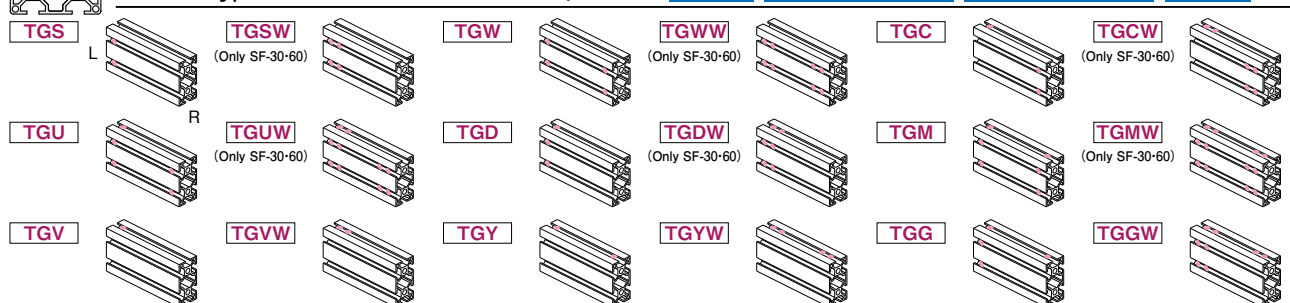
 Groove Type 2Rowsx2Rows (1 Flat Surface) ◆Object Frame... ^{※1} SF-40-40-2S-1F SF-60-60-2S-1F



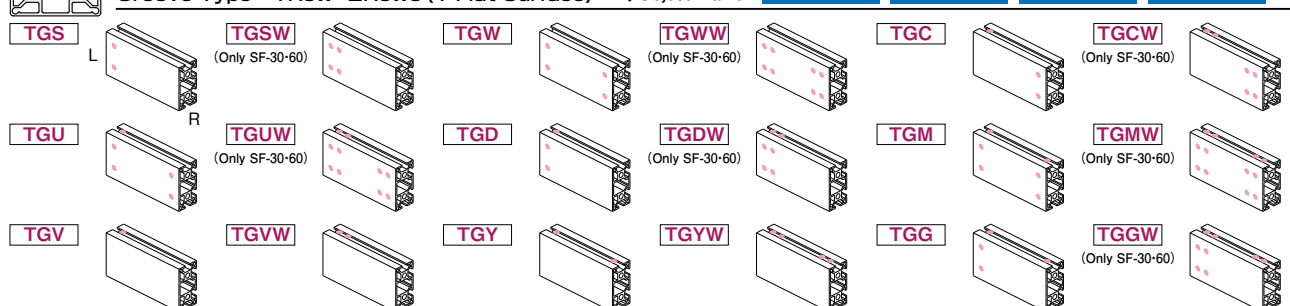
 Groove Type 2Rowsx2Rows (2 Flat Surfaces) ◆Object Frame... ^{※1} SF-40-40-2F SF-60-60-2S-2F



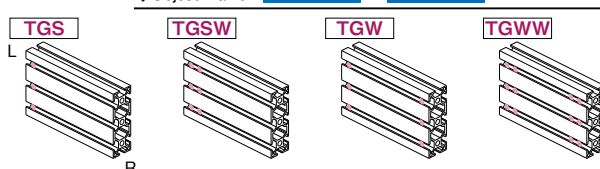
 Groove Type 1Rowx2Rows ◆Object Frame... ^{※1} SF-20-40 SF2-30-60 SF-K-30-60 SF2-40-80 SF-K-40-80 SF2-45-90



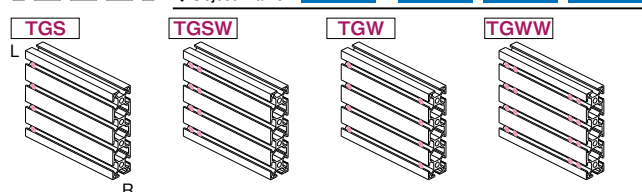
 Groove Type 1Rowx2Rows (1 Flat Surface) ◆Object Frame... ^{※1} SF-20-40-1F SF2-30-60-1F SF2-40-80-1F SF2-45-90-1F



 Groove Type 1Rowx3Rows ◆Object Frame... ^{※1} SF-20-60 SF-30-90



 Groove Type 1Rowx4Rows ◆Object Frame... ^{※1} SF-20-80 SF-30-120 SF-40-160 SF-45-180



SF20
SS Size

SF30
S Size

SF40-45
L Size

Complex Parts

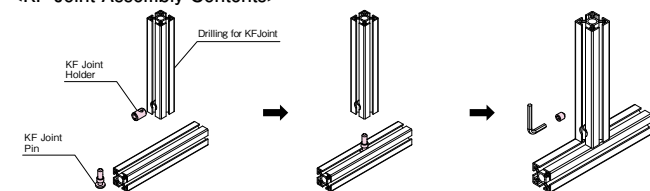
Door Panel
Clean Equipment

Technical Data

Technical Data Drilling Symbol for KF Joint

Drilling Symbol for KF Joint

<KF Joint Assembly Contents>

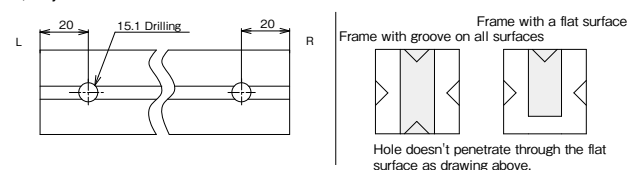


◆KF Joint…… After KF Joint processing on one of the frame, insert KF Joint Holder. Insert KF Joint Pin to another frame and inset to KF Joint Holder, and tighten by set screw to combine. Tightening is easier from one side as drawing above. Frame with a flat surface doesn't disturb the appearance to joint.

Please specify KF Processing No. below to the Frame to drill a hole for KF Joint in case using KF Joint in P70.

<Drawing of Position, Size and Depth of the Hole for KF Joint>

◆Object frame…SF-35・35 / 1F / 2F / 2H・SF-35・70 / 1F / 2F



Item No. Length(mm) Processing No.
SFF-3A4 **ℓ=800** **KFS**

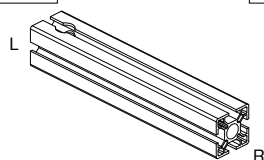
Joint Processing List



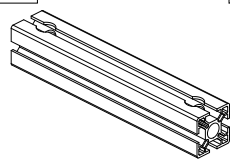
Groove Type 1Row×1Row

◆Object Frame… **SF-35・35**

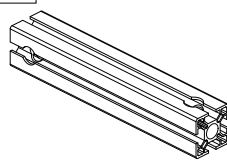
KFS



KFW



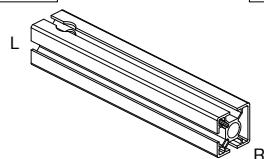
KFC



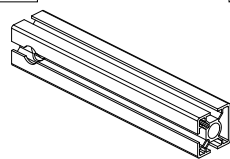
Groove Type 1Row×1Row<1 Flat Surface>

◆Object Frame… **SF-35・35・1F**

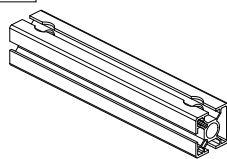
KFS



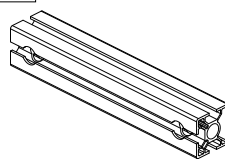
KFA



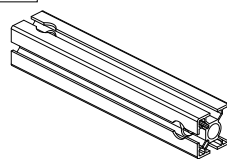
KFW



KFD



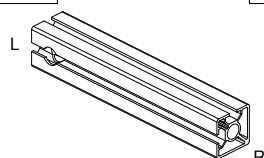
KFE



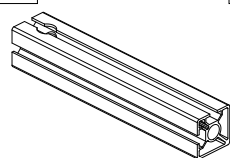
Groove Type 1Row×1Row<2 Flat Surfaces>

◆Object Frame… **SF-35・35・2F**

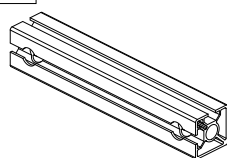
KFA



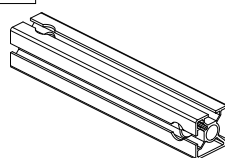
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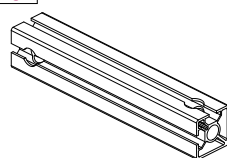
KFD



KFF



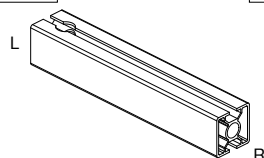
KFG



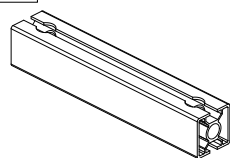
Groove Type 1Row×1Row<Opposite Faces Flat>

◆Object Frame… **SF-35・35・2H**

KFS



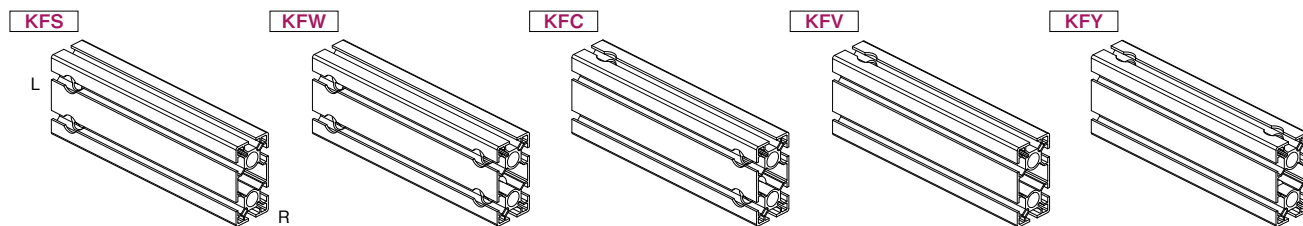
KFW





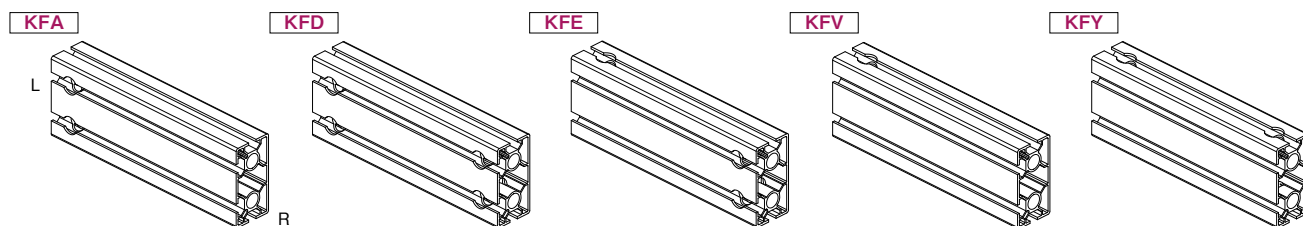
Groove Type 1 Row x 2 Rows

◆Object Frame... SF-35-70



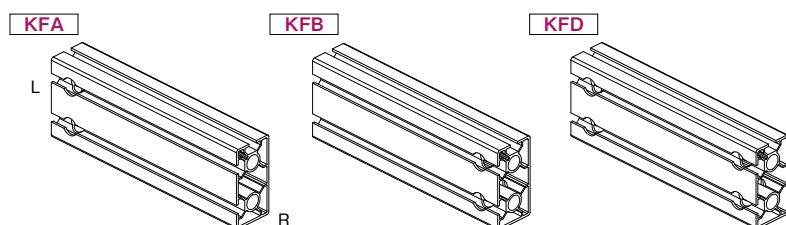
Groove Type 1 Row x 2 Rows (1 Flat Surface)

◆Object Frame... SF-35-70-1F

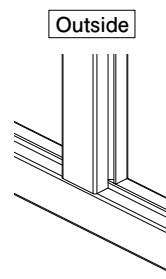
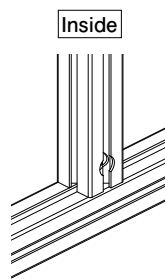
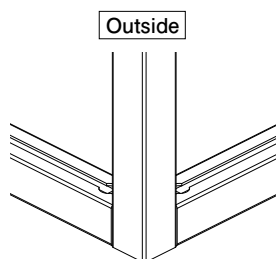
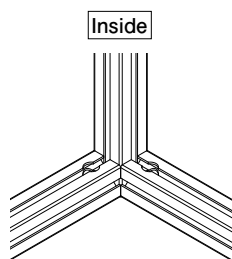


Groove Type 1 Row x 2 Rows (2 Flat Surfaces)

◆Object Frame... SF-35-70-2F



■Simple looking by using KF Joint because drilled hole cannot be seen externally.



■ Group Company

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